

1,000 YEARS, 1,000 PEOPLE

RANKING THE MEN AND WOMEN
WHO SHAPED THE MILLENNIUM

AGNES HOOPER GOTTLIEB, HENRY GOTTLIEB,
BARBARA BOWERS, BRENT BOWERS

1,000 YEARS, 1,000 PEOPLE

Now that we've successfully navigated the end of the millennium, it would be interesting to know who the real frontrunners were in that thousand-year marathon of the human race. Who had the greater impact, Martin Luther or Isaac Newton? Thomas Aquinas or Charles Darwin? Beethoven or Bach? But how do we establish a yardstick for measuring such a weighty subject?

The authors of *1,000 Years, 1,000 People* have come up with a method that grades the candidates according to five key criteria: lasting influence, contribution to wisdom and/or beauty, influence on contemporaries, singularity of contribution, and charisma. Then, they've sifted through the centuries and rated thousands of candidates. You may be surprised to learn that some of the key figures of our own time did not make the cut, while those in less high-profile, publicity-driven ages and places turned out to be millennial superstars. Or you may be astonished by the relative positions of, say, Jane Addams, John Marshall, and Bertrand Russell. Or you may find the most interesting people near the end of the book, where many highly important but relatively unknown history-makers dwell.

Young and old, women and men,
(Continued on back flap)

1,000 YEARS, 1,000 PEOPLE

RANKING THE MEN AND WOMEN
WHO SHAPED THE MILLENNIUM



AGNES HOOPER GOTTLIEB, HENRY GOTTLIEB,
BARBARA BOWERS, BRENT BOWERS

Flywell



MOSAIC BOOKS
New Delhi

<https://archive.org/details/namdhari>

A NOTE

With this publication, *One Thousand Years, One Thousand People*, Flywell is branching into the area of publishing. Our aim is to enrich society by helping to spread knowledge far and wide. In today's postmodernist world, knowledge is an important asset. If we Indians want to take major strides down the path of development and make the country strong, not only economically, but in every respect, we need a dynamic and vibrant knowledge-based society. Knowledge has to be disseminated to every strata of society. The light of knowledge will sweep away the darkness of ignorance. This is a mammoth task and requires help from enlightened citizens. By entering the field of publishing we are making our small contribution to this task. We are aware that in a country like India, the language for the dissemination of knowledge is also an important factor. Hence we plan to publish in the regional languages as well.

Anil Bal
Flywell Publications

© 2008 by Agnes Hooper Gottlieb, Henry Gottlieb, Barbara Bowers, and Brent Bowers

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying or otherwise, without prior written permission from the publisher.

ISBN 81-902776-7-7

Published by Flywell Publications, B/2/50, Safdarjung Enclave, New Delhi 110029
and
Mosaic Books, B-17, Lajpat Nagar Part 2, New Delhi 110024

Contents

Acknowledgments	v
Introduction	vii
A Guide to the BioGraph System	ix
The List	xi
Entries	
1–100	I
101–200	31
201–300	61
301–400	91
401–500	121
501–600	151
601–700	181
701–800	211
801–900	241
901–1,000	271
Ten Who Almost Made It	301
Some Interesting Facts	303
Where They Lived	303
When They Lived	304
How They Lived	305
Bibliography	307
Index	315

<https://archive.org/details/namdhari>

Acknowledgments

Our search for one thousand names and their proper rankings went beyond our own collective wisdom and the expertise of historians whose works we consulted. We sought advice from friends, professional colleagues, and scholars. Their willingness to help, and their enthusiasm—which often matched our own—has made this a better book. They gave us names that had not occurred to us, helped us understand the ebb and flow of trends in fields as various as abstract art and zoology, and even acted as arbitrators when we disagreed among ourselves.

We thank our friends and professional colleagues Deirdre Yates, Dan Yates, Tom Rondinella, John Sowa, Laura Schoppmann, Angela Weisl, Liz Milliken, Suzanne Samuels, Mary Balkun, Maxine Lurie, Don McKenna, Ken Hoffman, Maribel Holsworth, Chris Sharrett, Maurine H. Beasley, Tim J. O'Brien, Lisa Brennan, Pamela Brownstein, Barry Adler, Dana Canedy, Thomas Canedy, Ellen Musikant, Peter Messeri, Kitra MacPherson, Walter Lucas, Zsuzsa Wierda, Andy Wierda, Maureen Garde, Chris Hann, Judson Haverkamp,

Ann Haverkamp, Floyd Norris, Timothy O'Brien, Rebecca O'Brien, Larry Young, Sally Young, John Lettis, Judith C. Stark, and Anthony E. Lee.

Acknowledgment is also due to family members Bruce Bowers, Robert Bowers, Jason Bowers, Allison Bowers, Jay Fuhrman, Fern Denny, Gertrude and Ralph Sussman, Bernadette Hooper, Darcy and Sidney Gottlieb, Maryrose and Gene Mangan, Terry and Don Thompson, Patrick Thompson, Tom and Darla Hooper, John and Karen Hooper, Peg and Bob Huryk, Martin and Peg Hooper, Bernadette and John McVey, Jim and Marilyn Hooper, and Elizabeth and Edward Stevens.

The staffs of the West Orange, Maplewood, and Somerset County, New Jersey, public libraries and Seton Hall University Library offered valuable guidance to the resources in their collections.

We'd also like to thank our agent, Michael Cohn, and our editor, Nancy Cooperman Su. Their guidance and suggestions made this project possible.

Introduction

In the year 1001 doomsayers had to look for another line of work. God had spared the world fire and ice at the end of the first millennium. And so the curtain went up on act two of that great tragicomedy, human history, with hopes that it would play for at least another thousand years.

It did—and what a performance!

From the opening moments—a Scandinavian adventurer's tentative step on a new continent, a Japanese writer's creation of the first novel, a German priest's experiments with guns, and an Arab thinker's reveries about the mysteries of multiplication—the second millennium was a headlong rush to the edges of man's creative, and destructive, genius.

Before it was over, a man had walked on the moon, the power of the atom had been unleashed, a scientist had cloned a sheep named Dolly, Michelangelo had worked his magic on the Sistine Chapel, Shakespeare had plumbed the depths of the human soul, and Martin Luther King, Jr., had dreamed a dream. Before it was over, Hitler's war had killed 55 million people, and Stalin and Mao had turned half the world into a hell of murder and deceit.

Which brings us to what this book is about: the one thousand men and women who, over the course of the past one thousand years, did the most to shape the world, for better or for worse.

To make our exercise provocative, we ranked those people in order of importance, from number 1—Johannes Gutenberg, whose printing

press made possible the Renaissance, the Reformation, and the scientific revolution—to number 1,000, Andy Warhol, who knew a zeitgeist when he saw one and declared that everyone would be famous for fifteen minutes.

Yes, this is a book about people, though we disagree with the contention of nineteenth-century historian Thomas Carlyle that history is nothing but the story of great men (and, by extension, great women). Ideology counts, and so do economics and class struggles and sexual urges and the territorial imperative and spiritual longings. But without people there would be no events, creations, isms, or cultural trends. Where would Waterloo be without Napoleon? Communism without Marx? Religion without Francis of Assisi?

Choosing the top people was easy. Columbus, Luther, Galileo, Thomas Aquinas, and a couple hundred other names leaped to our minds. To round out the list, though, we consulted encyclopedias, haunted the biography sections of libraries, and read specialized histories of eras and locales. We boned up on subjects ranging from absolutism to Egyptian popular music.

Just as important, we asked dozens of friends

Introduction

and colleagues to propose names. And they did; boy, did they! Thanks to their responses, we have included relative unknowns, at least in the United States, like Bill W., Marion Donovan, and Umm Kulthum (no peeking allowed). We rejected more suggestions than we accepted, from the ridiculous Bart Simpson (only real people, please!) to the sublime Jesus Christ (sorry, wrong millennium). And we'll never forget the Thanksgiving dinner that was dominated by our debate with two art history teachers, who said we were fools for putting Da Vinci before Michelangelo. Maybe so, but we did it for a reason.

We based our ranking on a set of criteria of our own devising, the five-point BioGraph System. Using this system, we gave the greatest weight to the subject's lasting influence. But that is far from the whole picture. We also measured people by how much wisdom and beauty they added to or subtracted from the world, by their impact on their contemporaries, by the singularity of their genius or infamy, and finally by their level of fame or charisma. (You'll find a more detailed explanation of the BioGraph System on page ix.)

For our subjects, getting on the list was quite a demographic feat. While the World Population Council tells us that no feasible estimates exist for the number of people who have lived in the past millennium, we're going to go out on a limb and guess that it is around half of the 100 billion or so that the experts say have fretted their hour upon the stage ever since *Homo sapiens* broke away from the lower primates. After all, 5.8 billion humans walk the earth at the end of the millennium. If our calculation is correct, the chances of making the top thousand were one in fifty million.

One of the thousand who beat the odds, Oscar Wilde, said, "The only duty we owe history is to rewrite it." We hope we weren't too brutal in the process.

Nobody will say we made every call right; some historians will chide us even for trying. Yet we are confident that the book will be a catalyst for thought about the relative value of the millennium's inventions, ideas, and events, and the people behind them. We hope it finds favor among all those who love history, love arguing about history, or just love arguing.

So here it is: *1,000 Years, 1,000 People*.

A Guide to the BioGraph System

The BioGraph System is a unique method of defining that nebulous concept “importance,” for the various historical figures being judged. The system is easy to apply if you know about their lives, times, and influence. Each BioGraph point is awarded on the basis of answers to five questions. In order of their significance, they are:

1. *Lasting influence.* What was the person's impact on the millennium? To what extent was the history of the world, or a region, or perhaps even a profession, changed by this person? Maximum points: 10,000.

2. *Effect on the sum total of wisdom and beauty in the world.* How much of what makes life worth living—a work of music, painting, or literature, a well-turned philosophical argument, or a scientific concept—did the person contribute to mankind, or take away? Maximum points: 5,000.

3. *Influence on contemporaries.* How much did the person affect the world of his times? Maximum points: 4,000.

4. *Singularity of contribution.* To what extent was the person's achievement a product of her own genius, and to what extent did she depend on the work of others? Maximum points: 3,000.

5. *Charisma.* Simply put, how famous was the person? To what extent was he or she a household name to contemporaries and posterity? Maximum points: 2,000.

The highest score possible is 24,000; even Gutenberg, our number 1, fell far short, with 21,768 points. Why? After all, he earned 9,982 points for lasting influence, the most of any

figure in our book (though 18 shy of perfection, because nobody's perfect). We also awarded him 4,944 points out of a possible 5,000 for his contribution to wisdom and beauty; 3,761 out of 4,000 for his influence on contemporaries; and 2,871 out of 3,000 for his singularity of contribution.

Alas, we had to give poor Gutenberg an F for personal magnetism. Far from commanding the adulation of his contemporaries, he was in some ways a pathetic character. For example, after defaulting on a loan, he had to give up the very printing press that won him fame to a creditor. Thus, for charisma, he scores a paltry 210 out of 2,000.

Had he gotten a middling 1,000, he would have towered over every other man and woman of the millennium. As it was, he barely edged out four other movers and shakers.

Had we rated our subjects according to lasting influence alone, Gutenberg would still have taken the grand prize and Columbus would still be breathing down his neck. But Newton, now ranked sixth, would have displaced Luther for the third spot, and Shakespeare would have bumped Galileo into the low triple digits.

A Guide to the BioGraph System

Again, this raises the importance of the charisma wild card. Oscar Wilde, the British playwright, got heaps of points in this category for his wit and flamboyance; Hitler (may he roast in hell) got the most—1,991—for the evil spell he cast over a nation. If only Shakespeare had exhibited a bit more, he would have elbowed Gutenberg aside for top honors.

Since we mention Hitler, perhaps we should explain why he made number 20 on our list. His charisma helped, of course, but he rated high in all other categories, too, for the mayhem he sowed. Few would question the high score he got for lasting influence; after all, he changed the course of history. But some might wonder why he got rated so high in a category like “contribution” to wisdom and beauty. The answer is that the contribution was purely negative; his slaughter robbed posterity of untold geniuses and thus impoverished both the arts and the sciences.

Yes, we have included lots of villains, from Stalin to Blackbeard, history’s baddest pirate. But mostly we have leaned to the good guys, because they are the ones who make us glad to be alive and part of the human race. Just about everybody you think is important is probably mentioned in this book, and lots of people you’ve never heard of are too, like John Gorrie, or “Mr. Cool,” as we have nicknamed him, the inventor of modern refrigeration.

As we moved down the list of the millen-

nium’s most illustrious lights, it became somewhat more difficult for us to allocate numbers. Was there anything foreordained about ranking Savonarola, fifteenth-century Florence’s hectoring ayatollah, at number 303, just one notch behind the great French humanist François Rabelais and exactly one point ahead of Helen Keller? Not at all; frankly, if we had dined on fish and chips instead of hot dogs and sauerkraut the day we considered them, the results might have been much different. It may seem that we’ve assigned points to historical figures for their achievements in roughly the same way that a diners’ guide grades restaurants for their cuisine, decor, ambience, and price.

What you may have deduced by now is that, in making a total of five thousand calculations—five for each person—we often more or less winged it. Oh, we approached our task seriously. We closed our eyes and reflected. We paced. We perused one another’s numbers. We compared the relative merits of people within the same profession or trade, peeking at what we had allotted to Rembrandt, for example, before compiling the net historical worth of Rubens.

If such an exercise were a science, it would be an inexact science. If it were an art, it would be a primitive art. In fact, it is neither; it is a useful gimmick.

So take the BioGraph numbers with a grain of salt. The meat is in the reading.

The List

1-100

- | | | |
|-----------------------------|------------------------------------|-----------------------------------|
| 1. Johannes Gutenberg | 27. Peter the Great | 52. Wolfgang Amadeus Mozart |
| 2. Christopher Columbus | 28. Thomas Alva Edison | 53. John Milton |
| 3. Martin Luther | 29. William I of England | 54. Benjamin Franklin |
| 4. Galileo Galilei | 30. Dante Alighieri | 55. Alexander Fleming |
| 5. William Shakespeare | 31. Elizabeth I of England | 56. Martin Luther King, Jr. |
| 6. Isaac Newton | 32. Abraham Lincoln | 57. Toyotomi Hideyoshi |
| 7. Charles Darwin | 33. Johannes Kepler | 58. Frederick the Great |
| 8. Thomas Aquinas | 34. Leo Tolstoy | 59. Georg Wilhelm Friedrich Hegel |
| 9. Leonardo da Vinci | 35. Johann Sebastian Bach | 60. Chu Yüan-chang |
| 10. Ludwig van Beethoven | 36. Voltaire | 61. Emperor Charles V |
| 11. John Locke | 37. Franklin Delano Roosevelt | 62. Geoffrey Chaucer |
| 12. Mohandas K. Gandhi | 38. Winston Churchill | 63. Louis XIV of France |
| 13. Michelangelo Buonarroti | 39. Francis of Assisi | 64. Thomas Jefferson |
| 14. Karl Marx | 40. Niccolò Machiavelli | 65. Pope Urban II |
| 15. Sigmund Freud | 41. Vladimir Ilyich Lenin | 66. Marco Polo |
| 16. Napoleon I | 42. Ferdinand Magellan | 67. Antoine-Laurent Lavoisier |
| 17. Albert Einstein | 43. Genghis Khan | 68. Maximilien Robespierre |
| 18. Nicholas Copernicus | 44. Miguel de Cervantes Saavedra | 69. John Calvin |
| 19. Jean-Jacques Rousseau | 45. Mary Wollstonecraft | 70. Charles Dickens |
| 20. Adolf Hitler | 46. Rembrandt Harmenszoon van Rijn | 71. Suleiman the Magnificent |
| 21. Adam Smith | 47. William Harvey | 72. Paul Cézanne |
| 22. George Washington | 48. Simón Bolívar | 73. Murasaki Shikibu |
| 23. Wilbur Wright | 49. Immanuel Kant | 74. Alexander Graham Bell |
| 24. Orville Wright | 50. Mao Ze-dong | 75. Marie Curie |
| 25. René Descartes | 51. Henry Ford | |
| 26. Louis Pasteur | | |

The List

- | | | |
|-------------------------------|-----------------------------------|-------------------------------------|
| 76. John Eckert | 112. Petrarch | 153. Henry the Navigator |
| 77. Fyodor Dostoyevsky | 113. William Tecumseh Sherman | 154. Sarah Bernhardt |
| 78. Pope Innocent III | 114. Carl von Clausewitz | 155. Le Corbusier |
| 79. Frederick Douglass | 115. Ignatius of Loyola | 156. Louis-Jacques-Mandé Daguerre |
| 80. J. Robert Oppenheimer | 116. Okubo Toshimichi | 157. Gavriilo Princip |
| 81. John Stuart Mill | 117. Isabella I of Spain | 158. Vincent Van Gogh |
| 82. Joseph Stalin | 118. Otto von Bismarck | 159. Masaccio |
| 83. Joan of Arc | 119. Michael Faraday | 160. Frank Lloyd Wright |
| 84. Francis Bacon | 120. Florence Nightingale | 161. Ibn Sīnā |
| 85. Filippo Brunelleschi | 121. B. F. Skinner | 162. Oliver Cromwell |
| 86. Elizabeth Cady Stanton | 122. Joseph Lister | 163. Victor Hugo |
| 87. Vladimir K. Zworykin | 123. James D. Watson | 164. Averroës (Ibn Rushd) |
| 88. Gottfried Wilhelm Leibniz | 124. Thomas Hunt Morgan | 165. Richard Wagner |
| 89. William Le Baron Jenney | 125. Vasco da Gama | 166. Hugo Grotius |
| 90. Edward Jenner | 126. Saladin (Salah ad-Din Yusuf) | 167. Henrik Ibsen |
| 91. Queen Victoria | 127. David Ricardo | 168. Jane Austen |
| 92. Babur | 128. Ernest Rutherford | 169. Allen Du Mont |
| 93. Chu Hsi | 129. Raphael Sanzio | 170. Gamal Abdel Nasser |
| 94. Phineas T. Barnum | 130. Auguste Comte | 171. James Joyce |
| 95. Guglielmo Marconi | 131. Johann Wolfgang von Goethe | 172. Peter Abelard |
| 96. Marsilius of Padua | 132. Maimonides | 173. Mehmed II the Conqueror |
| 97. Desiderius Erasmus | 133. Andrea Palladio | 174. Joseph-Marie Jacquard |
| 98. Alexander von Humboldt | 134. Lech Walesa | 175. Jean-Baptiste Poquelin Molière |
| 99. Margaret Sanger | 135. Eli Whitney | 176. Caravaggio |
| 100. Henry VIII of England | 136. Max Planck | 177. Emperor Henry IV |
| | 137. Joseph Priestley | 178. Robert Goddard |
| | 138. Catherine the Great | 179. Prince Metternich |
| | 139. Susan B. Anthony | 180. Edmund Burke |
| | 140. Carl Benz | 181. Kemal Atatürk |
| | 141. Anna Eleanor Roosevelt | 182. Samuel Johnson |
| | 142. Robert Boyle | 183. Igor Stravinsky |
| | 143. George Stephenson | 184. George Eliot |
| | 144. Blaise Pascal | 185. David Hume |
| | 145. David Wark Griffith | 186. Albrecht Dürer |
| | 146. Carl Jung | 187. Ramanuja |
| | 147. George Boole | 188. Mark Twain |
| | 148. Akbar | 189. K'ang-hsi |
| | 149. Pablo Picasso | 190. Alexander Hamilton |
| | 150. Hernán Cortés | 191. Elizabeth of Hungary |
| | 151. Thomas Hobbes | 192. Anton Chekhov |
| | 152. Fakr ad-Din ar-Razi | 193. Yoshida Shoin |
| | | |

101-200

101. Petrus Peregrinus
 102. Otto Lilienthal
 103. Father Berthold Schwartz
 104. Gregor Mendel
 105. Nikolaus Otto
 106. Charles-Louis Montesquieu
 107. Anton van Leeuwenhoek
 108. Paracelsus
 109. Carl Gauss
 110. James Watt
 111. William Thomson

The List

194. James Cook
195. Benito Juárez
196. Claude Monet
197. Daniel Defoe
198. Dominic
199. Hieronymus Bosch
200. Nicolas Appert

201-300

201. John Maynard Keynes
202. Tycho Brahe
203. Pope Leo IX
204. W.E.B. DuBois
205. James Clerk Maxwell
206. Emmeline Pankhurst
207. Marcel Proust
208. Niels Bohr
209. Jane Addams
210. Aldus Manutius
211. Robert Koch
212. Theodor Herzl
213. Thomas Starzl
214. John Adams
215. Friedrich Nietzsche
216. Jomo Kenyatta
217. Alfred Nobel
218. Matsuo Basho
219. Giotto
220. Emil von Behring
221. Henry IV of France
222. Jawaharlal Nehru
223. Balthasar de
Beaujoyeux
224. Wilhelm II of Germany
225. Bartolomeo Cristofori
226. Francis Xavier
227. Elizabeth Blackwell
228. Lorenzo "the
Magnificent" de' Medici
229. Ivan the Great
230. Carl Linnaeus
231. Claudio Monteverdi
232. Oliver Evans
233. Franz Kafka

234. Andreas Vesalius
235. John McAdam
236. Vilhelm Bjerknes
237. Mikhail Gorbachev
238. Gianlorenzo Bernini
239. Bartholomé de Las Casas
240. Lucretia Mott
241. John III Sobieski of
Poland
242. Ito Hirobumi
243. Ivan the Terrible
244. Ivan Pavlov
245. Anna Pavlova
246. Robert Fulton
247. Georges Danton
248. John Dalton
249. Gratian
250. Paul Ehrlich
251. Baruch Spinoza
252. Charlotte Perkins
Gilman
253. Dmitry Mendeleev
254. Honoré de Balzac
255. Bernard of Clairvaux
256. Pieter Bruegel the Elder
257. Francis Drake
258. Donato Bramante
259. Christopher Wren
260. Auguste Rodin
261. Daniel Fahrenheit
262. Mayer Amschel
Rothschild
263. Samuel Adams
264. Leonardo of Pisa
265. Anders Celsius
266. Francis Joseph of
Austria-Hungary
267. Antoinette Louisa
Brown Blackwell
268. James Madison
269. Henri Matisse
270. Denis Diderot
271. Mitsui Takatoshi
272. Jacob Grimm

273. Wilhelm Grimm
274. Claude Debussy
275. Gottlieb Daimler
276. John of Austria
277. Wilhelm Conrad
Röntgen
278. Duke of Wellington
279. Edgar Allan Poe
280. John Donne
281. Peter Paul Rubens
282. Edward Coke
283. El Greco
284. Leo Hendrik Baekeland
285. Norman Borlaug
286. Ignaz Philipp
Simmelweis
287. John Marshall
288. Leopold von Ranke
289. Clara Barton
290. Sun Yat-sen
291. Johannes Fibiger
292. William Blackstone
293. James Naismith
294. Jean-Baptiste Colbert
295. Mi Fei
296. Franz Joseph Haydn
297. John Keats
298. John II of Portugal
299. Giambattista Vico
300. Franz Liszt

301-400

301. Édouard Manet
302. François Rabelais
303. Girolamo Savonarola
304. Helen Keller
305. Ida B. Wells-Barnett
306. Thomas Malthus
307. Pierre Beauchamp
308. Elisha Otis
309. Ferdinand Ritter von
Mannlicher
310. Ram Singh
311. Thomas Paine

The List

312. David Ben-Gurion
 313. Ibn Taymiyah
 (Taqi ad-Din)
 314. Jonas Salk
 315. William Blake
 316. Barthélemy Thimonnier
 317. Horace Mann
 318. Walt Whitman
 319. Donatello
 320. John Hawkins
 321. Giovanni Boccaccio
 322. Louis Armstrong
 323. Margaret Fuller
 324. Hung Hsiu-ch'üan
 325. Domingo Faustino
 Sarmiento
 326. Henry Bessemer
 327. Paul McCartney
 328. John Lennon
 329. Samuel Morse
 330. Aleksandr Pushkin
 331. Sandro Botticelli
 332. Kublai Khan
 333. Christiaan Huygens
 334. Andrés Bello
 335. Jan van Eyck
 336. Lise Meitner
 337. John Wycliffe
 338. Johannes Eckehart
 339. Jan Pieterszoon Coen
 340. Francisco José
 de Goya
 341. George Berkeley
 342. Franz Schubert
 343. John XXIII
 344. George Marshall
 345. Thomas More
 346. Auguste Escoffier
 347. Gerardus Mercator
 348. Thurgood Marshall
 349. Cardinal Richelieu
 350. Ibn al-'Arabi
 351. Charles Babbage
 352. Elvis Presley

353. Johannes Brahms
 354. Nelson Mandela
 355. Maria Theresa
 356. Firdawsi
 357. Walter Scott
 358. Betty Friedan
 359. Henry II of England
 360. Babe Ruth
 361. Yamagata Aritomo
 362. Pierre de Fermat
 363. Constantin Brancusi
 364. Ludwig Mies
 van der Rohe
 365. Søren Kierkegaard
 366. John Dryden
 367. Ezra Pound
 368. Giuseppe Garibaldi
 369. Jean Piaget
 370. Tokugawa Ieyasu
 371. Ulysses S. Grant
 372. Louisa May Alcott
 373. Clarence Birdseye
 374. Dwight D. Eisenhower
 375. Henry David Thoreau
 376. George P. Marsh
 377. Rachel Carson
 378. Pope Gregory VII
 379. Margaret Mead
 380. Menelik II of Ethiopia
 381. Bill W.
 382. Agatha Christie
 383. Jeremy Bentham
 384. Pierre-Auguste Renoir
 385. Lord Byron
 386. James Starley
 387. Jan Hus
 388. Ernest Hemingway
 389. Jean-Baptiste Racine
 390. Bernadette of Lourdes
 391. John Bunyan
 392. Richard Francis Burton
 393. Aphra Behn
 394. Samuel Taylor
 Coleridge

395. Enrico Fermi
 396. Yo Fei
 397. James Boswell
 398. Gustave Flaubert
 399. Jean-Paul Marat
 400. Tomás de Torquemada

401-500

401. Mikhail Bakunin
 402. Bartolomeu Dias
 403. Giovanni Bellini
 404. Nichiren
 405. Vaslav Nijinsky
 406. John Harington
 407. Osman I
 408. Guido of Arezzo
 409. André-Marie Ampère
 410. George Washington
 Carver
 411. Leif Eriksson
 412. Roger Bacon
 413. Wallace Hume
 Carothers
 414. Frederick Winslow
 Taylor
 415. Friedrich Engels
 416. John I of England
 417. Ferdinand Foch
 418. Aristide Boucicaut
 419. Charles-Maurice
 Talleyrand
 420. Eleanor of Aquitaine
 421. Ferdinand de Lesseps
 422. Yung-lo
 423. Gustavus Adolphus
 of Sweden
 424. Frédéric Chopin
 425. Alessandro Volta
 426. Eugene O'Neill
 427. Philip II of Spain
 428. Mathew Brady
 429. Leon Trotsky
 430. John Harvey Kellogg
 431. Konrad Adenauer

The List

- | | | |
|---------------------------------|-------------------------------|---|
| 432. Michel de Montaigne | 475. Pope Gregory IX | 516. Charles Lindbergh |
| 433. Jean Monnet | 476. Giuseppe Verdi | 517. Alp Arslan |
| 434. Jean-François Borel | 477. Hiroshige | 518. Winslow Homer |
| 435. John Pierpont Morgan | 478. Shah Jahan | 519. Jules Verne |
| 436. Henry Maudslay | 479. Emily Dickinson | 520. Giovanni Giacomo
Casanova de Seingalt |
| 437. Woodrow Wilson | 480. Emperor Frederick II | 521. William Butler Yeats |
| 438. Li Hung-chang | 481. Anne Frank | 522. Emily Brontë |
| 439. John III of Portugal | 482. Edgar Degas | 523. Dag Hammarskjöld |
| 440. Joseph Monier | 483. Jorge Luis Borges | 524. Johnny Torrio |
| 441. Virginia Woolf | 484. Bernardo O'Higgins | 525. William Faulkner |
| 442. Jackie Robinson | 485. Harry S Truman | 526. Duke Ellington |
| 443. James Buchanan Duke | 486. John D. Rockefeller | 527. Philip II of France |
| 444. John Roebling | 487. George Eastman | 528. Giovanni Pierluigi
da Palestrina |
| 445. Alan Turing | 488. 'Abd al-'Aziz ibn Sa'ud | 529. John Jacob Astor |
| 446. Louis Lumière | 489. William the Silent | 530. Francesco Borromini |
| 447. Vincent of Beauvais | 490. Wilhelm Wundt | 531. Christopher Latham
Sholes |
| 448. Henry Cavendish | 491. Maria Agnesi | 532. Thomas Chippendale |
| 449. Gabriele Falloppio | 492. Jonathan Swift | 533. François Villon |
| 450. John Gorrie | 493. Jakob Fugger | 534. Harriet Tubman |
| 451. Wassily Kandinsky | 494. Walt Disney | 535. Frederick Hopkins |
| 452. George III of England | 495. Edmund Kean | 536. Albert Luthuli |
| 453. Heinrich Hertz | 496. Ambroise Paré | 537. José Martí |
| 454. Gertrude Elion | 497. Baybars I | 538. Enrico Caruso |
| 455. Chiang Kai-shek | 498. Yasir Arafat | 539. Godfrey Newbold
Hounsfield |
| 456. Ibn al-Haytham | 499. Yuri Gagarin | 540. Levi Strauss |
| 457. Harriet Beecher Stowe | 500. Amelia Jenks Bloomer | 541. Benvenuto Cellini |
| 458. Booker T. Washington | | 542. Francisco de Orellana |
| 459. Charles de Gaulle | 501-600 | 543. William James |
| 460. Benito Mussolini | 501. Aaron Montgomery
Ward | 544. Washington Irving |
| 461. Ch'ien-lung | 502. Karen Horney | 545. Paul Gauguin |
| 462. Frederick Grant
Banting | 503. Luigi Galvani | 546. Tecumseh |
| 463. Albert Kahn | 504. Ralph Waldo Emerson | 547. John Knox |
| 464. Pope Clement VII | 505. Meriwether Lewis | 548. Margaret Bourke-
White |
| 465. Konstantin Stanislavsky | 506. Iwasaki Yataro | 549. Ibn Khaldun |
| 466. Fidel Castro | 507. Alfred Krupp | 550. Hans Christian
Andersen |
| 467. Philip of Hesse | 508. Jean de La Fontaine | 551. Félix Lope de Vega |
| 468. Eugène Delacroix | 509. Percy Bysshe Shelley | 552. Shaka |
| 469. Irving Berlin | 510. Nettie Maria Stevens | 553. Joseph Conrad |
| 470. Frederick Law Olmsted | 511. Tamerlane | |
| 471. Thomas Cranmer | 512. Charles Lyell | |
| 472. Walter Raleigh | 513. Jan Vermeer | |
| 473. John Montagu | 514. Hokusai | |
| 474. Cesare Beccaria | 515. Robert E. Lee | |

The List

- | | | |
|--|--------------------------------|------------------------------------|
| 554. Isadora Duncan | 596. Eisai | 636. Dietrich Bonhoeffer |
| 555. Fannie Farmer | 597. Ramakrishna | 637. Konstantin E. Tsiolkovsky |
| 556. Martin Behaim | 598. Minamoto no Yoritomo | 638. William Gladstone |
| 557. Henry James | 599. Nicolás de Ovando | 639. Benjamin Disraeli |
| 558. Jean-Baptiste Say | 600. Douglas MacArthur | 640. Philippe Pinel |
| 559. Marie LaChapelle | | 641. James Gordon Bennett |
| 560. Gustave Courbet | | 642. Inigo Jones |
| 561. Pierre Corneille | 601-700 | 643. Pierre-Marie-Alexis Millardet |
| 562. Benjamin Spock | 601. William of Ockham | 644. William Morris |
| 563. Abigail Adams | 602. King Gillette | 645. Peter Goldmark |
| 564. Rubén Darío | 603. Rowland Hill | 646. Robert A. Watson-Watt |
| 565. George Frederic Handel | 604. John R. Pierce | 647. Aleksandr Solzhenitsyn |
| 566. Cornelius Vanderbilt | 605. Joseph Henry | 648. Pierre-Joseph Proudhon |
| 567. Jalal ad-Din ar-Rumi | 606. Georgia O'Keeffe | 649. William Randolph Hearst |
| 568. Jean-Baptiste-Camille Corot | 607. Émile Zola | 650. Maria Montessori |
| 569. Duncan Phyfe | 608. Robert Browning | 651. Ts'ao Chan |
| 570. Bartholomaeus Anglicus | 609. Charles Goodyear | 652. Nicolas Leblanc |
| 571. Omar Khayyám | 610. Mary Stuart | 653. Dorothy Day |
| 572. Edwin Hubble | 611. Alexis de Tocqueville | 654. Edward Gibbon |
| 573. Simone de Beauvoir | 612. Robert Swanson | 655. James Wolfe |
| 574. Oscar Wilde | 613. Louis IX of France | 656. Elizabeth Seton |
| 575. George Wythe | 614. Helena Rubinstein | 657. Pierre Bonnard |
| 576. Zhou Enlai | 615. Sergey Prokofiev | 658. Stephen I of Hungary |
| 577. William Wordsworth | 616. Ian Wilmot | 659. Henry VII of England |
| 578. Gustav Mahler | 617. Niccolò Paganini | 660. John Gregg |
| 579. Anna Comnena | 618. Christina Rossetti | 661. Samuel Gompers |
| 580. Angela Merici | 619. Nikita Khrushchev | 662. Crazy Horse |
| 581. Mildred "Babe" Didrikson Zaharias | 620. Regiomontanus | 663. Gotthold Lessing |
| 582. Eamon De Valera | 621. Andreas Marggraf | 664. Grandma Moses |
| 583. Mahmud of Ghazna | 622. Charles Michel de L'Épée | 665. Luther Burbank |
| 584. Thomas Mann | 623. Deng Xiaoping | 666. Francisco Franco |
| 585. Mohammed Ali Jinnah | 624. Horatio Nelson | 667. Dom Pedro II of Brazil |
| 586. Mary Mallon | 625. Berthe Morisot | 668. Charles Atlas |
| 587. Honoré Daumier | 626. Paul Julius Reuter | 669. Haile Selassie |
| 588. Francisco de Miranda | 627. Pope John Paul II | 670. Albert Schweitzer |
| 589. Robert Owen | 628. Stephen Langton | 671. Hector Berlioz |
| 590. Rashi | 629. Anna Freud | 672. John James Audubon |
| 591. Lu Hsiün | 630. José de San Martín | 673. al-Mahdi |
| 592. Henri Cartier-Bresson | 631. Ernest Mach | 674. George Gamow |
| 593. Bertrand Russell | 632. Catherine de Médicis | 675. Nathaniel Hawthorne |
| 594. William of Sens | 633. Charles-Pierre Baudelaire | 676. Antonín Dvořák |
| 595. Anthony of Padua | 634. Ludwig Wittgenstein | |
| | 635. John Duns Scotus | |

The List

- | | | |
|-------------------------------|-------------------------------------|---------------------------------|
| 677. Frances Willard | 717. Katharine Dexter McCormick | 755. Mary Cassatt |
| 678. Jim Thorpe | 718. Giuseppe Fiorelli | 756. Robert Louis Stevenson |
| 679. Sato Eisaku | 719. Margaret Thatcher | 757. Tulsidas |
| 680. Joseph Glidden | 720. T. S. Eliot | 758. Samuel Pepys |
| 681. Muhammad Ali | 721. Colette | 759. Elizabeth Barrett Browning |
| 682. Dorothy Crowfoot Hodgkin | 722. Alfonso X of Spain | 760. George Orwell |
| 683. Blackbeard | 723. Martin Buber | 761. Jean-Bernard-Léon Foucault |
| 684. Alexander Parkes | 724. David Livingstone | 762. James McNeill Whistler |
| 685. Jacques Cousteau | 725. Gertrude Stein | 763. John Harvard |
| 686. Henry Fielding | 726. Albertus Magnus | 764. William S. Gilbert |
| 687. Gerhard Groote | 727. David Packard | 765. Herbert of Cherbury |
| 688. Chester Carlson | 728. Julia Margaret Cameron | 766. Muddy Waters |
| 689. Elizabeth Kenny | 729. Edward Robinson Squibb | 767. Izaak Walton |
| 690. Kwame Nkrumah | 730. Robert Noyce | 768. Daniel Edgar Sickles |
| 691. Thomas Carlyle | 731. Milton Friedman | 769. Buckminster Fuller |
| 692. John L. Sullivan | 732. Antonio Vivaldi | 770. Charles Frederick Worth |
| 693. Hannah Glasse | 733. Theodor Schwann | 771. Ou-yang Hsiu |
| 694. Blanche of Castile | 734. Mobutu Seso Seke | 772. Mother Teresa |
| 695. Zwangendaba | 735. Salvador Dali | 773. Mordecai Anielewicz |
| 696. Neil Armstrong | 736. Queen Margaret of Denmark | 774. Toni Morrison |
| 697. Bayezid | 737. Alexander Nevsky | 775. Andrei Sakharov |
| 698. Thomas Hopkins Gallaudet | 738. Friedrich Von Hayek | 776. Heinrich Schliemann |
| 699. Unkei | 739. Matteo Ricci | 777. Barthold Georg Niebuhr |
| 700. Theodore Roosevelt | 740. Ray Kroc | 778. Euclides da Cunha |
| | 741. Franz Boas | 779. Emily Post |
| | 742. Helmut Kohl | 780. Fernão Lopes |
| | 743. Pierre de Coubertin | 781. Marie-Antoinette |
| | 744. Ralph Nader | 782. Toussaint-L'Ouverture |
| | 745. Eduard Bernstein | 783. Alexander Calder |
| | 746. Alfred Hitchcock | 784. Louise Brown |
| | 747. Edward Bernays | 785. Jackson Pollock |
| | 748. Sébastien Le Prestre de Vauban | 786. George Fox |
| | 749. Charles Proteus Steinmetz | 787. Jonathan Edwards |
| | 750. Friedrich Wilhelm Bessel | 788. Werner Forssmann |
| | 751. Jean Nidetch | 789. Robert Baden-Powell |
| | 752. Albert Camus | 790. Robert the Bruce |
| | 753. Juan Perón | 791. Indira Gandhi |
| | 754. Stephen Crane | 792. Peter Carl Fabergé |
| | | 793. Cyrus McCormick |
| | | 794. Pope Julius II |
| | | 795. Charlie Chaplin |

The List

796. Thomas Babington
Macauley
797. Piet Mondrian
798. David Bushnell
799. Thomas Huxley
800. John Chapman

801-900

801. El Cid
802. Pope Gregory XIII
803. Johann Strauss
804. William Pitt the Elder
805. Henry de Bracton
806. Max Weber
807. Miguel Hidalgo
y Costilla
808. Herbert Spencer
809. Pierre Teilhard
de Chardin
810. William Wilberforce
811. Ben Jonson
812. Brigham Young
813. Leon Battista Alberti
814. Alexander Cartwright
815. Hans-Joachim Pabst
von Ohain
816. Jerzy Neyman
817. Henri Toulouse-Lautrec
818. Martha Graham
819. Charles H. Townes
820. Laurence Olivier
821. Malcolm X
822. Igor Sikorsky
823. John Pym
824. John Graunt
825. J. Willard Gibbs
826. Felix Hoffmann
827. Sarah Josepha Hale
828. Robert Frost
829. Francis Fry
830. David Sarnoff
831. Dom Pérignon
832. Friedrich Serturmer
833. Stephen Foster

834. Federico Fellini
835. Edwin Drake
836. Simon Stevin
837. Pope Boniface VIII
838. Sergey Diaghilev
839. Paul Klee
840. Pele
841. Richard Rodgers
842. Louis Wirth
843. Jayavarman VII
of Indochina
844. Langston Hughes
845. Lewis Carroll
846. Algernon Charles
Swinburne
847. Umm Kulthum
848. Lord Palmerston
849. Alfred Kinsey
850. The Marquis
de Lafayette
851. Cosimo de' Medici
852. Catherine of Aragon
853. Miyan Tansen
854. Bronislaw Malinowski
855. Maurice Ravel
856. Bernardino Ramazzini
857. George Gershwin
858. Francisco Pizarro
859. George Gallup
860. Bonaventure
861. Florence Kelley
862. Anwar el-Sadat
863. John Napier
864. Karl Landsteiner
865. Johann Pestalozzi
866. Christine de Pisan
867. Harvey Wiley
868. Kurosawa Akira
869. Robert Clive
870. Anthony Van Dyck
871. Luigi Pirandello
872. John Dewey
873. Dorothea Dix
874. Alexandre Dumas

875. François-André Philidor
876. Willard Libby
877. Alexander MacKenzie
878. Isaac Bashevis Singer
879. James I of England
880. Judah ha-Levi
881. Paul Kruger
882. Thomas Nast
883. Afonso de Albuquerque
884. Marcello Malpighi
885. John Macdonald
886. Emma Goldman
887. Arthur Rimbaud
888. Bob Dylan
889. Warren Buffett
890. Henri Bergson
891. John H. Hammond, Jr.
892. Giuseppe Mazzini
893. Samuel Hahnemann
894. Golda Meir
895. Henry Moore
896. John Henry Newman
897. Rabindranath Tagore
898. Mikhail Kutuzov
899. Jack London
900. Cole Porter

901-1,000

901. John Steinbeck
902. Frances Perkins
903. Michael Jordan
904. Richard M. Nixon
905. Reinhold Niebuhr
906. Friedrich Froebel
907. César Ritz
908. Erich Maria Remarque
909. Gregory Martin
910. Karl Barth
911. William Jennings
Bryan
912. Noam Chomsky
913. Hannah Arendt
914. Martin Heidegger
915. Franklin Kameny

The List

- | | | |
|--|---|--|
| <p>916. Frank Gilbreth
 917. Walter Hunt
 918. Joseph Goebbels
 919. William Cobbett
 920. Girolamo Fracastoro
 921. Sri Ramana Maharishi
 922. Paul Robeson
 923. Grote Reber
 924. John Philip Sousa
 925. Antonio de Mendoza
 926. Jean-Auguste-
 Dominique Ingres
 927. Samuel Beckett
 928. Peter Behrens
 929. Federico García Lorca
 930. Jane Cunningham
 Croly
 931. François Truffaut
 932. Robert Peel
 933. Stephen Biko
 934. Marcel Marceau
 935. George Mallory
 936. Henry Clay
 937. Hugh Hefner
 938. Pancho Villa
 939. Ibn Battutah
 940. Mata Hari
 941. Che Guevara
 942. Andre Malraux
 943. Emperor Maximilian I</p> | <p>944. Rosa Parks
 945. Simon Wiesenthal
 946. Benjamin Lee
 Guinness
 947. Josef Pilsudski
 948. Matthew Arnold
 949. Teresa of Ávila
 950. Kahlil Gibran
 951. Katharine Hepburn
 952. Cary Grant
 953. Julius Nyerere
 954. Dwight L. Moody
 955. Amina
 956. Louis Braille
 957. Edward Lear
 958. Ingmar Bergman
 959. John von Neumann
 960. Ada Byron Lovelace
 961. Andrew Carnegie
 962. Mary Pickford
 963. Roger Bannister
 964. John L. Lewis
 965. Aaron Copland
 966. Srinivasa Ramanujan
 967. Charles Drew
 968. Captain Kidd
 969. Sciopone Riva-Rocci
 970. Harry Houdini
 971. Virginia Apgar
 972. Coco Chanel</p> | <p>973. Francis Baring
 974. René-Théophile-
 Hyacinthe Laënnec
 975. Jethro Tull
 976. Sergey Korolyov
 977. Henry Shrapnel
 978. Alfred Sloan, Jr.
 979. Albert Lasker
 980. Daniel Hale Williams
 981. A.P. Giannini
 982. John Pemberton
 983. Marion Donovan
 984. Mahalia Jackson
 985. Henry Rous
 986. Henry Robert
 987. Al Neuharth
 988. Walter C. Wingfield
 989. Fela
 990. Joseph Bramah
 991. Hubert Booth
 992. Edmond Hoyle
 993. Ella Fitzgerald
 994. William Levitt
 995. Elijah McCoy
 996. Bernard Cornfeld
 997. Marilyn Monroe
 998. Theodore Seuss
 Geisel
 999. George Santayana
 1,000. Andy Warhol</p> |
|--|---|--|

Ten Who Almost Made It

Lady Godiva
Amerigo Vespucci
Pocahontas
Pyotr Ilich Tchaikovsky
Ronald Reagan
John F. Kennedy
Oprah Winfrey
William Gates
Cal Ripkin, Jr.
Diana, Princess of Wales

Updates and Errata

Updates

Since the original publication of this book, fourteen of those ranked have died:

Betty Friedan (#358) died 2006
Gertrude Elion (#454) died 1999
Godfrey Newbold Hounsfield (#539) died 2004
Henri Cartier-Bresson (#592) died 2004
John R. Pierce (#604) died 2002
Pope John Paul II (#627) died 2005
Hans-Joachim Pabst von Ohain (#815) died 1998
Grote Reber (#923) died 2002
Rosa Parks (#944) died 2005
Simon Wiesenthal (#945) died 2005
Katharine Hepburn (#951) died 2003
Julius Nyerere (#953) died 1999
Marion Donovan (#983) died 1998

and from the "Ten Who Almost Made It" section:

Ronald Reagan died 2004

In addition, two of those ranked had died prior to original publication:

Dorothy Crowfoot Hodgkin (#682) died 1994
Robert Noyce (#730) died 1990

Errata

Pages xix and 302. Cal *Ripken*, Jr., not Ripkin.

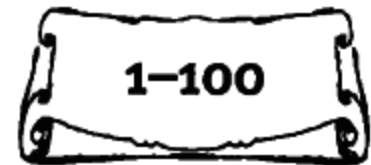
Pages xix and 298. *Theodor* Seuss Geisel, not Theodore.

Page 61. *Brett* Favre, not Bret.

Page 109. Pierre de Fermat (#362). The "last theorem" equation should read: $x^n + y^n = z^n$

Page 272. Michael Jordan (#903). His height is *six-foot-six*, not six-foot-nine.

Page 302. John F. Kennedy was assassinated on *November* 22, 1963, not December.



If you are looking for the unsung and the underappreciated, skip the first chapter.

From number 1, Johannes Gutenberg, to number 100, Henry VIII of England, the names of the top people of the millennium will be familiar to most readers, or should be. Of course, that won't stop the quibbling.

Was Galileo the greatest scientist, George Washington the most important American, Elizabeth I of England the foremost woman? Is Beethoven—a mere scribbler of melodies, many will argue—worthy of inclusion in the top 10? We say yes to those questions.

We also say that it is too soon to define the lasting influence of people who are alive now. So none of them is in the top 100 and neither are many of our *near* contemporaries.

Einstein, Churchill, Mao, Fleming, Stalin, King, Oppenheimer, Zworykin, Sanger, and Eckert are the only members of the top 100 to live in the second half of the twentieth century, and only computer pioneer Eckert, who died in 1995, came close to reaching the next millennium.

Our first living legend: DNA detective James Watson, who is in the second group of 100.

But we're getting ahead of ourselves . . .

1 JOHANNES GUTENBERG (1394?-1468)
our man of the millennium

If not for Gutenberg, Columbus (2) might never have set sail, Shakespeare's (5) genius could have died with him, and Martin Luther's (3) Ninety-five Theses would have hung on that door unheeded. In fact, without mass quantities of books to burn, the Inquisition could have fallen flat on its face. The printing press, developed by goldsmith Gutenberg in the 1430s, helped spread truth, beauty, and yes, heresy throughout the world. We know the Chinese had movable type for centuries before Gutenberg, but they used it for silk printing, not books. Gutenberg, however, always had publishing in mind. Copies of his first major project, the Bible, survive today. He worked for years to perfect his system of movable type and a press that could mass-produce books, leaflets, and propaganda. What little is known about Gutenberg comes from the many lawsuits filed against him for the rights to the invention. But no one successfully challenged Gutenberg's place as the Western inventor of movable type and the printing press. Because his press unharnessed the power of ideas on the world, we rank him ahead of the people whose ideas found an audience through printing. **21,768**

2 CHRISTOPHER COLUMBUS (1451-1506)
the agent of Western civilization

This Genoese weaver's son altered the fabric of civilization by convincing Spanish queen Isabella (117) to finance his plan to sail west to beat the Portuguese to the treasures of the East. Bad math helped his salesmanship; he underestimated the miles to Japan by 8,200. Lucky for him, a new world was in the way. Biographer Samuel Eliot Morison called Columbus's October 12, 1492, landing on a spit of sand on San Salvador the most important event for

humanity since the birth of Christ. From prehistory, the earth had been populated by aborigines at one with nature, not above it. Columbus's arrival hastened the burial of pastoral cultures under the steamroller of Western progress. Medieval advances in seafaring made the fatal contact inevitable, but Columbus gets points for getting there first. **21,756**

3 MARTIN LUTHER (1483-1546)
the monk who divided Christendom

On October 31, 1517, Saxon monk Martin Luther tacked his Ninety-five Theses to the door of Wittenberg's castle church, and the world was never the same. His denunciation of priestly hucksters' "get-out-of-sin-free" indulgences started a revolt that ended Western Christendom's twelve hundred years of ideological unity, touched off a century and a half of religious warfare, and stimulated nationalism and capitalism. Reformer Desiderius Erasmus (97) tried to get Luther to tone down the attacks on the pope, but Luther was pigheaded. Using the new printing technology to whip up a following, Luther belittled the sacraments, argued for state power over religion, and championed heresies we now consider commonplace. Decades later Catholic emperor Charles V (61) said his worst mistake was not hanging Luther. If he had, maybe Charles would be number 3 on our list. **21,753**

4 GALILEO GALILEI (1564-1642)
founder of modern science

Copernicus (18) popularized the heretical idea that the earth was not central to the universe. For teaching how to search for what *was*, we rank Galileo highest among scientists. Galileo built the first astronomical telescope, discovered the craters of the moon, invented a better clock, and revealed the laws of bodies in motion. Better yet

were his abstract contributions—yoking mathematics to physics and showing that truth comes from experiments that prove theories, not from dogma. He paid for those contributions. In 1633 the Inquisition silenced him, but not his creed. “Minds created free by God must never be enslaved,” Galileo wrote in the margins of his Copernicus-championing book, *The Dialogues*. Old ideas die hard. Not until 1822 did the Catholic Church lift its ban on *The Dialogues*. In the modern world science has triumphed over superstition because of Galileo and experimenters who followed him. **21,751**

5 WILLIAM SHAKESPEARE (1564–1616) *mirror of the millennium's soul*

Of all poets, said John Dryden (366), Shakespeare had the largest and most comprehensive soul. Also the largest vocabulary, employing 24,000 different words to create his works. What fools we mortals be to sing his praises in so few. But even the Bard of Avon would concede that brevity is the soul of wit. So consider this: Shakespeare gave the stage the immortal *Hamlet*, *Macbeth*, *Othello*, *King Lear*, and much more—but left no personal letters. Records show he was born and reared in Stratford-upon-Avon, had a solid education steeped in Latin, and, historians think, gained experience in theater before surfacing in London in 1587 as playwright, director, and actor. Shakespeare was more intent on building his family's good name and comfortable lifestyle than in preserving his works. Thankfully, seven years after his death, two associates published his plays. Poet William Wordsworth (577), a great admirer, once exclaimed in a weak moment to essayist Charles Lamb that “anyone could write like Shakespeare if he had a mind to it.” To which Lamb replied: “All that's lacking is, apparently, the mind.” **21,709**

6 ISAAC NEWTON (1642–1727) *the big apple of science*

Yes, we judge him ahead of Copernicus (18) and Einstein (17) (and behind Galileo only because the Italian sage led the way). One would have to go back 2,400 years to meet his match (in Aristotle). Born the year Galileo (4) died, a premature baby so small his mother said he could fit into a quart mug, Newton wasn't expected to live. But live he did, and what a life! Wrote Alexander Pope: “Nature and Nature's laws lay hid in night: / God said, Let Newton be! and all was light.” William Wordsworth (577) described him as “a mind forever / Voyaging through strange seas of thought, alone.” He discovered the laws of gravity and motion that hold the universe together, founded the science of physical optics, and shared the invention of the calculus with Leibniz (88). Voltaire (36) spread the story, apocryphal or not, that a falling apple inspired him. Newton was hot-tempered and vindictive, but the author of *Principia Mathematica* and inaugurator of the Age of Reason can be forgiven almost any foible. **21,706**

7 CHARLES DARWIN (1809–1882) *detonator of the scientific revolution known as the theory of evolution*

Just as Copernicus (18) displaced the earth from the center of the universe, so Darwin exiled man from the company of the angels, and God from the Creation story, with his doctrine of natural selection and his proposal that all living creatures evolved from a common ancestor. Ironically, the book this British naturalist took on his five-year voyage aboard the H.M.S. *Beagle* to survey South America's coasts was Milton's (53) *Paradise Lost*. We rate Darwin's *Origin of the Species*, the fruit of the *Beagle* expedition, the most influential book of the nineteenth century, surpassing even Marx's

(14) *Das Kapital*. For not only did it overthrow beliefs dating back to man's beginnings, its conclusions, unlike Marx's, endure. Despite his discovery of the struggle for survival, Darwin hated nature's "clumsy, wasteful, blundering, low and horribly cruel works." For him, the cruelest was an insect bite in an Andean village that turned him into a semi-invalid for life. Still, Nature gave him the strength afterward to marry his cousin and produce five little Darwins. **21,689**

8 THOMAS AQUINAS (1225-1274) *Christianity's voice of reason*

Tommaso d'Aquino's noble Italian family was so adamant against his decision to join the Dominicans that his mother had him imprisoned in the family castle. Then, the story goes, his brothers tried to lure him from his vocation with a prostitute. It was not to be. Thomas held her off with a torch and joined the religious order. Often referred to as a "dumb ox" because he was so physically slow, Thomas's mind succeeded where his body could not. His masterpiece, *Summa Theologica*, reconciled the teachings of classical philosophers with Catholic doctrine. Since then other philosophers have merely sifted through his genius, but none has usurped his position as the church's most important philosopher. In his two-million-word tome, Thomas provided billions of Christians for eight hundred years with the proof of God's existence and answered moral questions, but he died before completing his discussion on the life of Christ. **21,685**

9 LEONARDO DA VINCI (1452-1519) *the ultimate Renaissance man*

Illegitimate son of a peasant girl and a Florentine lawyer, Leonardo's amazing artistic talent surfaced when he was a mere boy. He produced few paintings—and left some unfinished—but he

still created masterpieces. Best known is the celebrated *Mona Lisa*, whose eyes are said to shine with the artist's own mysterious wisdom. Da Vinci's scope was limitless; the epitome of the Renaissance man, he worked as a military architect and engineer, studied geology, botany, hydraulics, and mechanics, and did theoretical work in mathematics. Through it all he saw art as a means to intellectual growth. His mission became to observe and record—through scientific drawings and commentary—all the world's objects, including the human organism, drawn from cadavers he dissected in a hospital. Sigmund Freud (15) said, "He was like a man who wakes up too early, in pitch darkness, while everyone else is still sleeping." To contemporaries, Leonardo lived more in the future than his present; among the thousands of pages of his drawings are plans for submarines and flying machines. **21,634**

10 LUDWIG VAN BEETHOVEN (1770-1827) *music's titan*

An autopsy by a doctor, aptly named Wagner, revealed that the convolutions in Beethoven's brain were extraordinarily deep and wide. Might as well dissect a sunset to explain God. Before Beethoven, the best music could transport the listener to occasional psychic realms of beauty and truth. But in Beethoven's mightiest symphonies, concertos, chamber works, and opera, *Fidelio*, the transports are infinite and unceasing. Some were written in the throes of a cruel deafness. "The thing that marks him out from all the others, is his disturbing quality, his power of unsettling us and imposing his giant moods on us," music-loving playwright George Bernard Shaw wrote. As the bridge between classicism and romanticism, Beethoven was the starting point for worship of the new, the nineteenth century's

dubious contribution to art. Our favorite compositions: the magisterial Ninth Symphony, of course, and the last six string quartets. **21,631**

11 JOHN LOCKE (1632-1704) *democracy's philosopher*

The asthmatic Locke found nothing more suffocating than metaphysical disputation. "Fiddling" is what he called such unproductive philosophizing. He believed in facts, facts, facts. Nothing is innate, he claimed; all knowledge is derived from experience. Such concepts had a profound influence on education and science. Even more important were his thoughts on government. He believed in checks and balances, the sanctity of property and labor, and the absurdity of hereditary rule. Looking for examples of his influence? Start with the Declaration of Independence and the U.S. Constitution. This Puritan lawyer's son was a physician and public servant whose association with fellow liberals made the uptight government of England's Charles II queasy. So Locke went to Holland, always a haven for freethinkers. No wunderkind, he didn't put his thoughts on paper until he was fifty-four, after the English Revolution of 1688 made it safe. **21,627**

12 MOHANDAS K. GANDHI (1869-1948) *the peaceful slayer of an empire*

The unassertive Gandhi failed at law in India, so he took his practice to South Africa. There he found his calling: employing civil disobedience to fight injustice against minority Indians. Back home, the loincloth-clad Gandhi led a life of abstinence and prayer while he struggled to win India's independence from British rule. Indians revered him as Mahatma, "the Great Soul." The British considered him a thorn in their side. Gandhi launched widespread resistance movements in 1920-22, 1930-34, and 1940-42. In 1947

the British yielded and granted India dominion status. Even Gandhi's opponents had to admire him. While jailed in South Africa for challenging the government, he had made sandals for General Jan Smuts. The statesman returned them years later, saying, "I am not worthy to stand in the shoes of so great a man." After Gandhi, Western colonialism was doomed. On his way to evening prayers, the peace-loving Gandhi was assassinated by a Hindu fanatic. **21,614**

13 MICHELANGELO BUONARROTI (1475-1564) *first among artists*

By the time Michelangelo died at age eighty-eight, Renaissance Italians believed him divine—how else could they explain his genius? Michelangelo fought the disapproval of his aristocratic father to apprentice as an artist, then studied anatomy by dissecting corpses. In 1499 he signed a contract promising to create "the most beautiful work in marble which exists today in Rome." He sculpted the *Pietà*, which still meets that description. Then his nude statue of *David*, crafted from a discarded hunk of marble, revealed his understanding of the human form. When Pope Julius II (794) conscripted him to do something with the ceiling of a small chapel at St. Peter's, Michelangelo balked. He was a sculptor, he said, not a painter. Yet this completed ceiling in the Sistine Chapel, whose creation required four years of backbreaking labor conducted seventy feet off the ground, remains the most magnificent fresco ever painted. **21,579**

14 KARL MARX (1818-1883) *founder of modern communism*

Half the world was once ruled in his name; today Marxists fight for survival in university history departments. The German philosopher's central proposition was the triumph of the workers in a

class struggle ordained by the iron laws of history. His writings ranged from the turgid economic analysis of *Das Kapital* ("Capitalist production begets its own negation") to the wit of the *Eighteenth Brumaire of Louis Bonaparte* with its put-down of Napoleon III (history repeats itself "the first time as tragedy, the second time as farce"). His voluminous writings formed the core of Communist ideology. In college, after a spree of carousing, he plunged so deeply into his studies that his father, a converted Jewish lawyer, rebuked him for "brooding over melancholy oil lamps." Forced to seek political refuge in London, he haunted the British Museum and wrote about Europe for Horace Greeley's *New York Tribune* while his family ate potatoes in a two-room flat. **21,566**

15 SIGMUND FREUD (1856–1939) sage of the subconscious

As the founder of psychoanalysis, Freud altered forever our view of the human mind with his concepts of the Oedipus complex, dreams, wish fulfillment, the pleasure-unpleasure principle, transference, and the mind's division into id, ego, and superego. Reading Freud can be fun; our favorite: "Sometimes a cigar is just a cigar." Freud alienated disciples like Alfred Adler and Carl Jung (146), and lately revisionists have taken to branding him a megalomaniac and his theories unscientific drivel. But his thinking was original and profound, contributing immeasurably to our understanding of people's motives and behavior. Besides, how can you dislike a guy who wrote his betrothed nine hundred love letters? **21,550**

16 NAPOLEON I (1769–1821) the human god of war

Napoleon Bonaparte's genius on the battlefield outweighs his shortcomings. Suffering from a

classic Napoleonic complex, the five-foot-two native of Corsica fought in the French Revolution and became a general by age twenty-five, later to become France's dictator. Napoleon's civil code, which is still the law in much of Europe, reorganized the courts and guaranteed citizens the freedoms promised by the Revolution. Then Napoleon got carried away by his own success. He proclaimed himself emperor of France in 1804 and swept across Europe with his army, creating the largest European empire since the Romans. In every conquered territory he abolished feudalism and established a parliament—but make no mistake, he was still a dictator. His undoing came when he tried to conquer Russia. Europe united against him, and he met his Waterloo on a battlefield in Belgium in June 1815. He escaped to St. Helena in the Atlantic Ocean, where he lived in exile and died six years later of stomach cancer. **21,545**

17 ALBERT EINSTEIN (1879–1955) the brain behind the revolution in physics

His general theory of relativity supplanted Newton's (6) mechanistic vision of the universe by viewing gravity as a curvature through space-time. In many ways his life was a tragedy. A pacifist, he propelled the world into the atomic age. The foremost scientific genius of the twentieth century, he rejected tenets of quantum theory with all its incertitude (because "God is not malicious") and spent his final years in futile pursuit of a unified field theory of the universe. A father figure to the world (he once asked why "nobody understands me and everybody likes me"), he let down his own children, giving up a daughter for adoption and alienating his younger son by his aloofness. Despairing over humanity's inhumanity, this German Jew who

fled the Nazis to America once said, "Politics are for the moment. An equation is for eternity." His, establishing the equivalence of mass and energy, was $E = mc^2$. **21,544**

18 NICHOLAS COPERNICUS (1473-1543) *astronomer who dethroned man from the center of the cosmos*

We know now that the earth revolves around the sun. But half a millennium ago the idea was incomprehensible: "No one in his senses will ever think the earth, heavy and unwieldy from its own weight and mass, staggers up and down around its own center and that of the sun," declared Jean Bodin, a sixteenth-century religious liberal. The Polish Copernicus initially challenged that orthodoxy reluctantly, but his studies of the sky and ancient texts forced him finally to reject it. His theory overthrew the fifteen-hundred-year-old Ptolemaic system and laid the foundation for modern astronomy and Newtonian physics. Historian Arthur Koestler called Copernicus a "conservative cleric, who started the revolution against his will." Indeed, he procrastinated so long in publishing his findings that the manuscript reached him only on his deathbed—by which time, wrote his friend Bishop Giese, "he had lost his memory." **21,425**

19 JEAN-JACQUES ROUSSEAU (1712-1778) *spiritual father of just about everything*

Revolution, romanticism, individualism, communism, fascism, psychoanalysis, sexism—you name it, you can find its origins in the writings of Rousseau. He was a contradiction-filled Swiss-born philosopher who abandoned his offspring but then wrote *Émile*, a child-rearing guide that influenced generations of educators. He believed that humans were inherently good, and he

championed civil rights in such masterpieces as *The Social Contract*, but he argued that women belonged in the kitchen. "Man is born free, but everywhere he is in chains," Rousseau wrote, but he also called for the subjugation of the individual to the will of the state. That sounds like fascism to us. Psychohistorians say Rousseau's obsession with his deformed penis—he wrote about it without giving graphic details—made him neurotic. Hard to prove, but such revelations in his *Confessions* showed Rousseau-ridden romantics how to elevate delightful excesses of public introspection into art. **21,414**

20 ADOLF HITLER (1889-1945) *the millennium's most evil man*

It is relatively easy to explain the rise of a dictator who preached national pride to a country that had been humiliated in World War I, but no words explain Hitler. Despots of centuries past were barbarians ignorant of civilized behavior. That doesn't diminish their culpability, but it underscores Hitler's. He was supposed to be a civilized man of a civilized time. Yet the extermination of Jews in death camps was his "final solution of the Jewish question." A high-school dropout who was gassed in World War I as a soldier, Hitler seized control of Germany as head of the Nazi Party in 1933. His invasion of Poland triggered World War II. By the time he committed suicide in defeat, he had killed six million Jews in the Holocaust and his country was wrenched in half—a schism that lasted more than forty years. **21,410**

21 ADAM SMITH (1723-1790) *high priest of capitalism*

As Marx's theories fade into irrelevance, this Scottish scholar's star continues to rise. His

Wealth of Nations, published in 1776, is the bible of the classical school of economics, with its attacks on mercantilism and government intrusion in the marketplace, its defense of free trade, and its exaltation of private property and individual self-interest (guided always by the "invisible hand" of society's well-being). In the 1960s such principles came under relentless attack; at the dawn of the new millennium, they underpin the global economy. Smith also got in some delicious digs at bureaucrats, like: "The whole, or almost the whole, public revenue, is in most countries, employed in maintaining unproductive hands." His book's wonderful "Index of Subjects" is worth reading on its own merits. Samples: "Beggars, alone depends on benevolence, 14; once synonymous with scholar, 132," and "Cockfighting has ruined many, 859." **21,375**

22 **GEORGE WASHINGTON** (1732–1799) *"Father of Our Country"*

He could have been King George I. But while some architects of the Constitution favored a monarchy, Washington had a democratic vision. He refused a crown but was elected president unanimously at the Constitutional Convention in 1789. In office Washington set precedents for the workings of the executive branch. Thanks to his quiet stalwart leadership, this new government system was given a chance to flourish. Before Washington became president, he was already a legend. The apocryphal story of chopping down his father's cherry tree and then confessing because, he said, "I cannot tell a lie," illustrates the esteem Washington had earned among his countrymen. As commander of the Continental Army during the revolution, Washington showed battlefield brilliance. Again, his successes are steeped in legend—regrouping his forces in the bitter winter at Valley Forge, cross-

ing the Delaware River, and sleeping at countless bed and breakfasts along the way. **21,370**

23 & 24 **WILBUR** (1867–1912) and **ORVILLE** (1871–1948) **WRIGHT** *the original "Wright Stuff"*

No one person invented the airplane. Like many great innovations—the automobile, the television, and the computer, for example—the airplane resulted from the work of many. But Wilbur and Orville score big points for being the first to fly a powered, manned airplane. Try as we have to pen separate entries for Wilbur and Orville, their stories are inextricably entwined—they were always a team. First they edited a newspaper in their hometown of Dayton, Ohio. Then they designed and manufactured bicycles there. Together they explored the mysteries of flight. Using the foundational research of German Otto Lilienthal (102), the Wright brothers constructed a flying machine with a twelve-horsepower engine, a sleek propeller, and a movable rudder for controlling direction. Weighing in at 750 pounds, including the pilot, the plane flew into history on December 17, 1903, when it took off from a field near Kitty Hawk, North Carolina, and stayed aloft for fifty-nine seconds. Travel was never again the same. After that first flight the Wright brothers improved their "aeroplane" and promoted it. Wilbur died of typhoid fever thirty-six years before his younger brother. Orville, however, reaped the financial benefits of their achievement. He lived to see his invention reduce around-the-world travel to hours, change the course of warfare, and transform twentieth-century life. **FOR EACH: 21,362**

25 **RENÉ DESCARTES** (1596–1650) *progenitor of modern philosophy and inventor of analytic geometry*

The boy Descartes asked "Why?" so often, his

father dubbed him his "little philosopher." Taught by demanding Jesuits, he nevertheless found his education lacking. He was plagued by uncertainties and had "the extreme desire to distinguish truth from falsity." So, cushioned by an inheritance and his patrons' largesse, Descartes devoted 1628-49 to quiet study in the Netherlands and produced his major philosophical works, notably the *Meditations*. In it he discarded scholasticism, which arrived at "truths" based on the views of authorities, and instead applied the rational inductive methods of science and mathematics to philosophy. Vowing to consider nothing true until he could find grounds for believing it so, he established one firm fact: "I think, therefore I am." Descartes also developed the Cartesian coordinate system for graphing equations and geometric shapes, which guides mapmakers even today. **21,348**

26 LOUIS PASTEUR (1822-1895) *human scourge of microorganisms*

Pasteur's theory that disease occurs when germs attack the body from the outside triumphed over the long-held view that germs were spontaneously produced in substances themselves. Today the French researcher's name graces milk cartons for his "pasteurization" process, which safeguards beverages and foods by zapping harmful germs with heat. Countless human and animal lives have been saved with vaccines he developed against rabies and anthrax. Contemporaries hailed him as a hero for using science to master nature and aid mankind. Pasteur had almost superhuman powers of observation and was obsessed with germs both in and outside the lab. Friends said Pasteur avoided shaking hands for fear of infection, wiped his plate and glass with his napkin to remove contaminating dirt before dining, and painstakingly dissected his bread, finding tiny bits of foreign

matter, including roaches, where nobody else could see them. **21,332**

27 PETER THE GREAT (1672-1725) *czar who built Russia into a great power by Westernizing it*

Posing as "Sergeant Mikhaylov" on a trip through Holland, England, and Austria in 1697-98, Peter seized upon the technological innovations of those countries wherever he saw them. Back home, he launched a feverish program to create Russia's first navy and modernize its military, designing some of the guns himself. He banned beards—too "Asian"—and sheared recalcitrant aristocrats himself. He would sometimes smack his ministers with his walking stick, especially if he were hung over from one of his massive drinking bouts. He was ruthless in amassing power, yet once, awestruck at a conspirator's ability to withstand torture, Peter walked up to him, kissed him, and forgave him. He died from a fever after diving from his yacht into icy waters to save a boatload of drowning soldiers. **21,317**

28 THOMAS ALVA EDISON (1847-1931) *the man who lit the world*

The electric light bulb, phonograph, and movie projector were among Edison's 1,093 patented inventions, many of which revolutionized modern life. The phonograph, for one, allowed sound for the first time to be recorded mechanically. Equally worthy was his Menlo Park, New Jersey, lab, with its white-coated assistants conducting experiments in assembly-line style, a forerunner of the industrial research laboratory. The nation hailed his achievements, but making money, not headlines, had always been Edison's prime motivation. By forty he was a millionaire, yet he couldn't manage his wealth and was chronically in debt. A genius at technology, he was socially inept. He was fired

from job after job for recklessness. Once he wired a washbasin and gleefully watched the near-electrocution of coworkers. The years finally sobered Edison, although they couldn't curb his zest for discovery. At age eighty-two he said: "I am long on ideas but short of time. I only expect to live to be about one hundred." One thing Edison couldn't invent was more time. He died at eighty-four. **21,310**

29 WILLIAM I (c.1028-1087) "the Conqueror" of England

Without this French feudal lord's arrival on the scene, England could have stayed a backwater for centuries. First known as "William the Bastard," he survived childhood as the target of murderous relatives. It honed him into one of the greatest soldiers and rulers of the Middle Ages. In October 1066 William led a force of six thousand men from northern France, across the English Channel, and to landfall near Hastings, where they defeated and killed King Harold of England. William's firm hand brought unity and a centralized government to the Anglo-Saxon land, strengthened the justice system through use of juries, and linked England economically with France and Mediterranean states. Greedy and pitiless, William wanted to squeeze more taxes from his subjects when he commissioned the Domesday Book. But this massive survey of English land—village by village—is now prized as a historical gem. **21,295**

30 DANTE ALIGHIERI (1265-1321) divine poet of vernacular verse

Modern literature owes Dante big-time. Because this philosopher-poet chose to write in his native Italian rather than clerical Latin, he paved the way for Europe's emerging lay culture. He's best known for his epic poem, *The Divine Comedy*, a challenging read for the best of us. It's his vision of Hell, Purgatory, and Paradise. Magnificent

verse on its own, the poem is rich with theology, allegory, symbol, and commentary on contemporary life. It also mirrors Dante's own life story and spiritual development. When he wrote it, the dour Dante was a lost soul exiled from his native city of Florence after political enemies condemned him to death. His writings drew inspiration from his love for the beautiful Beatrice Portinari, a Florentine aristocrat he hardly knew, who died young. In *The Divine Comedy* Dante gives her immortality as Beatrice, his fictional guide through Paradise. **21,280**

31 ELIZABETH I (1533-1603) molder of the modern British state

In forty-five anxious years of rule, she put England in the Protestant camp, unleashed the sea dogs who started the British Empire, and best of all, put trust in that cockpit of popular sovereignty, the House of Commons. Elizabeth surrounded herself with brilliant advisers like William Cecil, Walter Raleigh (472), and Francis Walsingham, and she listened to them. Up to a point. Independence was her prized possession, and she kept it by coy avoidance of marriage-minded princes and courtiers. Elizabeth's bravest act: ordering off the wigged head of her Catholic rival to the throne, Mary Queen of Scots (610), who would have ruined England with her beautiful wickedness. The defeat of the Spanish Armada in 1588 was Elizabeth's finest hour. Winston Churchill (38), an expert in such matters, wrote, "She had a capacity for inspiring devotion that is perhaps unparalleled among British sovereigns." **21,271**

32 ABRAHAM LINCOLN (1809-1865) savior of the American union

Born in poverty in a log cabin in Kentucky, Abraham Lincoln grew (and grew—he was the tallest president, at six foot four) to become Amer-

ica's second-greatest leader. Lincoln, nicknamed "Old Abe" at age thirty-eight, won the presidency in 1860. When southern states rebelled, he led the North through the Civil War. His Emancipation Proclamation freed slaves in rebel states. "If my name ever goes into history, it will be for this act," he said. A fine orator, Lincoln's brief speech at the consecration of a cemetery on the site of the decisive battle of Gettysburg has become legendary American rhetoric. His assassination during a performance of *Our American Cousin* in Ford's Theater in Washington, D.C., elevated him to folk-hero status. While his February 12 birthday no longer earns his own national holiday, Lincoln's distinct profile, bony frame, and craggy face are etched in the annals of American history. **21,255**

33 JOHANNES KEPLER (1571-1630) *discoverer of the paths of the planets*

Much of Kepler's work was astrological claptrap. He cast horoscopes for German nobles, but hey, everybody's got to make a living. His best achievement was discovering the proof that Copernicus (18) was right and that the earth and other planets *do* revolve around the sun. Kepler was an assistant to Tycho Brahe (202), a Dane who gathered volumes of data on the movements of the planets, especially Mars. Kepler studied the tables until he had his brainstorm that the orbits were elliptical. Eureka! Everything fit. Kepler's work also paved the way for calculus, and his ideas about planetary attraction provided the foundation for Isaac Newton's (6) principles. Nonscientific events, like the Thirty Years War, could be a distraction; it's hard to concentrate when you are evacuating a town. **21,249**

34 LEO TOLSTOY (1828-1910) *superman of letters*

For *War and Peace* alone, he earns humankind's eternal gratitude. This tale of Russia caught up

in Napoleon's (16) invasion is the greatest novel, a window both on Russia and the human soul. French historian Henri Troyat called it a "hymn to man and nature whose like has not been seen in the literature of the world." Tolstoy's energy was boundless; his son Ilya recalled how he took up Greek in his fifties and within six weeks was translating Herodotus. A man of contradictions—soldier turned pacifist, philanthropist turned puritanical Christian, aristocrat turned peasants' champion—he also had a spiritual pride that bordered on messianism. To British writer Paul Johnson, Tolstoy thought of himself as "God's elder brother." But his advice to fellow writer Ivan Bunin was down to earth: "There is no happiness in life, only occasional flares of it. You must learn to live on them." **21,239**

35 JOHANN SEBASTIAN BACH (1685-1750) *inspiration for three centuries of musicians*

It amazes us how a man who fathered twenty children found the energy to produce so much profound music. For churches and courts in music-mad Germany, Bach wrote hundreds of works for organ, instrumental ensembles, and chorus, many dashed off like a pastor's sermon in time for Sunday service. No master was better at weaving seemingly unconnected notes into a complex but coherent whole capped by a climax, and every scribbler of music from Mozart (52) to the moderns has been his awestruck debtor. If his appeal to later generations of casual listeners were greater, we would have ranked Bach before Beethoven (10). Even before he died, Bach's baroque style made him a musical fuddy-duddy to audiences keen for the breezier homophonic styles of newcomers, including four Bach sons. Our favorite Bach: the *St. Matthew Passion* and any fugue that's handy. **21,233**

36 **VOLTAIRE** (1694–1778) *apostle of enlightenment*

He was a lifelong hypochondriac, but the autocratic religious and civic institutions of eighteenth-century France made him truly sick. Voltaire was the most popular Continental writer of his age, and even the establishment was riveted when he argued that God was neither just nor evil. Man, employing reason, was the only force for good on earth, he wrote in works that formed the intellectual underpinnings of the revolution that burst in France a decade after his death. "There will be an explosion at the first opportunity, and there will be quite a rumpus," he predicted. *Candide*, one of the ten most influential books of the millennium, taught that laughter and resignation are mankind's hope in a world beset by horror. Unlike most writers, Voltaire was a wise investor. His estate was worth \$50 million in today's money.

21,231

37 **FRANKLIN DELANO ROOSEVELT** (1882–1945) *protector of the American way of life*

Most Americans think of FDR, the thirty-second president of the United States, as the creator of social welfare; we prefer to think of him as the president who preserved capitalism, restored faith in government, and saved the world from Hitler (20). When FDR became president in 1933, America wallowed in the Great Depression. His building and road projects put desperate people back to work until factories geared up to arm the Allies. Without FDR's vision, capitalism could have been destroyed and America could have fallen prey to the evils that lurked across the oceans—fascism, Nazism, and Communism. While his New Deal revived the American economy, his "fireside chats" reassured a frightened people they had "nothing to fear but fear itself." The most popular president since George Washington (22),

his election to unprecedented third and fourth terms provided the Allied leadership needed to ensure victory during World War II. 21,215

38 **WINSTON CHURCHILL** (1874–1965) *hero of England's finest hour*

To pay homage to Churchill, we paraphrase the words of the twentieth century's greatest orator himself. After all, never in the field of human conflict was so much owed by so many to one man. Early in World War II, when the British fought by themselves but not for themselves, Prime Minister Churchill offered countrymen his blood, toil, tears, and sweat. In his gravelly voice and with his signature cigar, Churchill prodded the conscience of democracy to resist Adolf Hitler (20) and his monstrous tyranny, the foulest and most soul-destroying tyranny. He crafted alliances with both President Roosevelt and Joseph Stalin (82), first to give Churchill the tools of war and ultimately to finish the job. How he led his people through their finest hour, even while Britain faded as a great world power, is *not* a riddle wrapped in a mystery inside an enigma. 21,206

39 **FRANCIS OF ASSISI** (1181/82–1226) *instrument of peace*

Saint Francis was a ladies' man and Italian soldier until he had a vision of Christ and gave himself over to the poor, begging with them and mingling with lepers. He revered nature as the handiwork of God, calling animals his brothers and sisters. But he was no medieval ecologist; his purpose was to walk in Christ's footsteps. Traveling with the Crusaders in Egypt, he once tried to convert a town's Muslim defenders. Another time he preached naked from an Assisi pulpit. (You can look it up.) He was the first known Christian to find himself marked with the stigmata of the crucified Christ. The Franciscan order that he

founded has made immense contributions to Western scholarship, but its main influence has been spiritual. "I have done what I had to do," Francis said toward the end of his life; "may Christ teach you what is your part." **21,182**

40 **NICCOLÒ MACHIAVELLI** (1469-1527) *first modern political scientist*

If Machiavelli had been more Machiavellian, he would have cozied up to Giovanni de' Medici. When the Medicis took over Florence in 1512, they kicked Machiavelli out of his job as a diplomat. What do ex-officials do? They write books. Machiavelli's was *The Prince*, a Hints-from-Heloise book for despots on how to get power and keep it and one of the most influential political books of all time. It pooh-poohs rectitude as a tool for governance and rates Renaissance thug Cesare Borgia the ideal ruler. "Machiavellian" has come to describe those who use unscrupulous means to achieve power. That's terribly unfair. Machiavelli was merely a creature of his times, and a thoughtful philosopher, too. He helped develop secular history and political science by championing the notion that good government is government that works and needs no moral and religious underpinnings. **21,176**

41 **VLADIMIR ILYICH LENIN** (1870-1924) *primal revolutionary*

He founded the Russian Communist Party, formulated Marxism-Leninism (you really must read all fifty-five volumes), led the Bolshevik Revolution, created the Soviet police state, quashed the counterrevolution, centralized the economy, and preached revolution abroad, all with a fanatical will. What drove him? Fury at the czar for hanging his beloved older brother? Revenge against his childhood playmates for calling their fat friend "little barrel"? No matter;

Lenin created the nightmare of twentieth-century totalitarianism that engulfed half the globe.

"Hang—hang without fail, so the people will see," he ordered police in suppressing a peasants' revolt. Toward the end of his life, he apologized: "I am, it seems, strongly guilty before the workers of Russia." And in his secret testament he deplored the accumulation of power by his "coarse" lieutenant, Stalin (82). By then, it was too late. Stalin—who some believed poisoned him—was present at Lenin's autopsy. **21,162**

42 **FERDINAND MAGELLAN** (c.1480-1521) *leader of the first trip around the world*

When sixteenth-century Europeans realized America was not the Spice Islands, they wondered if there was a way to sail around the new continent. Magellan said yes and proved it on history's most courageous voyage. Leading 237 men in five worm-worn ships, this Portuguese traitor in Spain's service started west in 1519 on the first circumnavigation of the globe. He found the southern passage that bears his name and was the first European to cross the Pacific. One ship with a mere eighteen survivors completed the voyage home. Storms, disease, starvation, aborigines, and Portuguese captors claimed the rest, including Magellan himself; Filipinos shot him full of arrows during a skirmish. The sponsors, happy to have Spain in the spice trade, shrugged off the terrible toll. The surviving ship, *Victoria*, held twenty-six tons of cloves, cinnamon, mace, and nutmeg worth 7.8 million *maravedis*, double the cost of the five original vessels. **21,154**

43 **GENGHIS KHAN** (1167?-1227) *destroyer of Asia*

We blame the Mongol clan Tayichi'uts for Genghis Khan. Legend says they captured the nine-year-old princeling but neglected to kill him.

Genghis Khan never made such mistakes. His armies swept out of the northern steppes, crushing cities and cultures, and slaughtering more millions than history can count. Why did he do it? Some say for loot, and some say he was merely protecting his flanks from the Chinese, whom his followers ruled for 108 years. The Mongol empire in what is now China, Russia, and the Islamic world was the largest land mass ever consolidated under one clan. Genghis Khan was barbaric on an epic scale; Arab historians go so far as to blame the present aridity of the Middle East on his destruction of irrigation systems. Nearing death, Genghis Khan sought a potion to make him immortal. Thank God that exceeded his reach. **21,143**

44 MIGUEL DE CERVANTES SAAVEDRA (1547–1616) creator of the most beloved fool in literature

The peripatetic Cervantes tried soldiering—before his capture and five-year enslavement by Barbary pirates—then civil service, even tax collecting. Except for his bravery in battle, he failed at everything except writing. Even there he didn't make his mark until age fifty-seven and the publication of *Don Quixote*, a worldwide sensation. This parody of then-popular chivalric romances features the delusional Don Quixote, a country gentleman who believes he's a knight. With his earthy squire, Sancho Panza, Don Quixote sets off to pursue a noble but impossible quest. Through many generations—and translations into more than sixty languages and publication in seven hundred editions—this tale has captured the popular imagination and influenced musicians, poets, and artists, notably Picasso (149). Its impact on the development of prose fiction, and the evolution of the European novel, is immeasurable. This outcome would have floored Cervantes if he had known. The Spanish novelist, dramatist, and poet

thought his crowning achievement was *The Trials of Persiles and Sigismunda*. Huh? **21,130**

45 MARY WOLLSTONECRAFT (1759–1797) beacon for women's rights

Like a character from one of her romantic novels, Wollstonecraft developed a radical concept of womanhood after she suffered the indignity of an abusive father who squandered her inheritance and favored his firstborn son. Her *Vindication of the Rights of Woman*, published in 1792, challenged women to resist male domination. Written more than half a century before the emergence of the first women's rights movement, her book provided the philosophical underpinnings for suffragists and later equal rights advocates to use to construct their arguments of equality. While her writings caused a furor, her personal life was no less scandalous. She bore a daughter out of wedlock and then, when she discovered herself pregnant by another man a few years later, married William Godwin. She died giving birth to daughter Mary, a future writer and wife of poet Percy Shelley (509). **21,114**

46 REMBRANDT HARMENSZON VAN RIJN (1606–1669) master of the Dutch masters

In 1947 Rembrandt's famous group portrait, *The Nightwatch*, underwent a cleaning. As centuries of grit were lifted, curators discovered it was actually a daytime scene. Like his masterpiece, Rembrandt's once-sullied reputation has been rehabilitated. Well into the eighteenth century critics called him a vulgar painter, ruled by greed and vanity. We know differently now. Rembrandt reached his creative and productive heights after age fifty-five. In all he produced six hundred paintings, including numerous self-portraits, three hundred etchings, and nearly two thousand drawings. His intuitive understanding of human nature

coupled with his brilliant technique has had enormous influence on artists through the centuries. Art experts now agree: no other painter has ever achieved Rembrandt's mastery of chiaroscuro effects, the play of light and dark in a scene. Our enduring favorites: *Aristotle Contemplating the Bust of Homer* and *A Girl at the Window*. **21,096**

47 WILLIAM HARVEY (1578-1657)
the physician who unlocked
the secrets of blood circulation

It's so simple, we teach it in second-grade science: the heart is a pump that circulates the blood. For centuries, however, the human body was a mystery. Aristotle suggested that blood originated in the liver; ancient physicians theorized that arteries carried special spirits. Some doctors believed blood moved in spurts through the body, but they had no idea how. Then along came Harvey, the British physician who paved the way for modern physiology with his dissections of pigs, dogs, and other small animals. He discovered it was the heart, not the liver, that pumped blood. He described the blood's path. On the subject of reproduction, Harvey again disputed Aristotle, who had hypothesized that woman's role was merely as a vessel for man's seed. Harvey, who attended to kings, suggested (accurately, it was proved some 150 years later) that mammals are produced from eggs. **21,081**

48 SIMÓN BOLÍVAR (1783-1830)
liberator of South America

History has been kind to Bolívar. He was, in some ways, the George Washington (22) of South America. He wrestled control of his continent away from the strangling tentacles of Spain; he abhorred servitude and believed in freedom for freedom's sake; he envisioned a united South America; and he served as first president of Venezuela and Peru. One region he liberated in southern Peru was

named Bolivia in his honor. That's where the similarities to our man George end. A powerful orator and writer, Bolívar inspired and led the rebellion. Yet at his death he was feared and reviled as a dictator by the very people he had liberated. But as Bolívar himself once observed, "To judge revolutions and their leaders, we must watch them at close range and judge them at a great distance." Distance rehabilitated Bolívar. Today he is revered as "the Great Liberator." **21,072**

49 IMMANUEL KANT (1724-1804)
metaphysician of the modern world

German existentialist Karl Jaspers once declared it was not enough to say Kant was the culmination of the Enlightenment; rather, "Kant surpassed the Enlightenment." Kant held that certain realities—"things in themselves"—lie outside reason, which can know only objects of experience. Thus, you know you stubbed your toe, but you can't be sure God exists. However, Kant's famous categorical imperative—"act as though the maxim from which you act were to become through your will a universal law"—requires you to believe in God anyway in order to live a just life. Kant's thinking underpinned subsequent Western innovations in philosophy, theology, history, psychiatry, and the physical sciences. For all the sweep of his scholarship, however, the five-foot-tall Prussian with a shrunken chest never ventured more than sixty miles from his hometown and rarely broke a daily routine that began with a five A.M. breakfast of weak tea and a pipe of tobacco. **21,069**

50 MAO ZE-DONG (1893-1976)
China's unifier—but at horrendous cost

Mao transformed China from a backward nation into a world power with nuclear weapons. But of all the twentieth century's tyrants, his actions killed the most people. He fought a guerrilla war against

the Japanese in the 1930s, civil war against Chiang Kai-shek (455) that led to the 1949 Communist takeover, and a proxy war with the United States over Korea. During his thirty-seven-year rule, he proclaimed freedom of expression ("Let a hundred flowers bloom"), then stomped on those who spoke their minds; launched the "Great Leap Forward" collectivization of agriculture that left thirty million dead; and proclaimed the Cultural Revolution that killed millions more. As a child, he impulsively gave his coat to a starving boy. As an old man, he infected hundreds of peasant girls with a venereal disease that was harmless to him. **21,054**

51 HENRY FORD (1863-1947) *mover of mass production*

While many nineteenth-century inventor types claimed to be the genius behind the automobile, Ford makes our list not for being the first but for being the most innovative in putting cars together. A high-school dropout at age sixteen, Ford's knack for tinkering began with his childhood hobby repairing watches. He designed his first car in 1896, then opened his own company in an investor's garage. Next, he analyzed how cars were constructed. After seven years of study, Ford perfected an assembly line made up of forty-five different steps that produced an automobile in ninety-three minutes. Using this technique, Ford produced fifteen million of his popular Model T's over a twenty-year period, ultimately lowering the cost of an automobile so that it was within the reach of the common man, and creating a repetitive, monotonous and boring occupation—work on the assembly line. **21,041**

52 WOLFGANG AMADEUS MOZART (1756-1791) *musical mingler of art and entertainment*

When Mozart was twelve, he wrote his first opera, but by then he was already a veteran; at six

he won plaudits as a keyboard artist, and at eight he wrote a symphony—not a memorable one but a symphony nonetheless. In those days Mozart was a curiosity schlepped around Europe's drawing rooms by his father Leopold. It was a life that should have burned him out at twentysomething. Not Mozart. He lasted to age thirty-four and in the ten years before his death created dozens of concertos, operas, symphonies, and chamber works that have been performance mainstays for two centuries. No one ever wrote music so joyously entertaining and profoundly artistic at the same moment—music that appeals equally to the heart and the head. Our Mozart greatest hits: *Don Giovanni*, the later piano concertos, and all the string quintets. **21,026**

53 JOHN MILTON (1608-1674) *poet of Paradise*

Valued as the greatest English poet after Shakespeare (5), Milton wrote rich, dense verse that inspired writers for centuries. One of them, Alfred Lord Tennyson, called Milton "the God-gifted organ-voice of England." As a youth, Milton had longed to write a great heroic poem about England, but he got sidetracked by growing political unrest and wound up penning revolutionary pamphlets and treatises championing religious and civil liberties. He lost his eyesight while toiling as a secretary in Oliver Cromwell's (162) council. This blindness brought one blessing: it probably spared him from execution for treason when the royalists regained power. Milton later said, "The light is not so much lost as turned inwards, for the sharpening of my mind's edge." That hard-won clarity helped shape *Paradise Lost*, Milton's epic poem—ten years in the making—on man's fall from God's grace. He composed this poem, section by section, in his head, then dictated it to family members. **21,022**

54 BENJAMIN FRANKLIN (1706-1790) *America's Renaissance man*

He achieved fame as writer and printer of *Poor Richard's Almanack*, laced with maxims such as "A penny saved is a penny earned." He invented bifocals, the lightning rod, and the fuel-efficient Franklin stove. In Philadelphia he founded the University of Pennsylvania, the nation's first university, and the first public library. By 1757 Franklin was wealthy enough to retire and enter public service. He told his mother he had other goals than getting rich: "I would rather have it said 'he lived usefully' than 'he died rich.'" Franklin more than achieved that aim. He fine-tuned Thomas Jefferson's (64) draft of the Declaration of Independence. Once the American Revolution was over, he negotiated peace with England and helped frame the Constitution, the fundamental law of the United States. But his greatest contribution was convincing the French, through sheer charm, to provide financial and military aid to the rebel colonies. That marked the turning point of the Revolution. **20,988**

55 ALEXANDER FLEMING (1881-1955) *discoverer of antibiotics*

He is an inspiration to those of us who find mysterious fuzzy growths lurking in our refrigerators. If the British scientist Fleming had been a neatness freak, the penicillium fungus growing on his petri dish would never have flourished. But Fleming routinely let dirty petri dishes accumulate. When he finally got around to cleaning up, he'd scrutinize each dish to see if anything interesting had happened. Once, he set a dish aside for several weeks. When he came back, he discovered, to his chagrin, that mold had spoiled the specimen. But wait! He realized that the mold had actually dissolved the bacteria. Thus Fleming discovered penicillin, a drug that has saved countless lives. He shared a Nobel Prize in medicine with Harold Florey and Ernst

Chain, who developed penicillin for mass production in the early 1940s. Their work created the most important series of drugs ever—antibiotics. **20,973**

56 MARTIN LUTHER KING, JR. (1929-1968) *minister to a divided nation*

His doctrine of nonviolent protest stirred the compassion of millions and set the course of the U.S. civil rights movement. At age twenty-six King masterminded the bus boycott in Montgomery, Alabama. For 382 days blacks refused to ride buses until the Supreme Court shattered the "separate but equal" principle upon which segregation was based. King was jailed, threatened, and hated, but never disheartened. At the 1963 March on Washington, in a speech destined for history books and forensics competitions, King described his dream of equality to some two hundred thousand protestors. On April 3, 1968, four years after passage of a federal civil rights law that prohibited segregation, King ominously warned that trying times lay ahead: "I've been to the mountaintop . . . And I've looked over and I've seen the Promised Land. I may not get there with you." The next day King was dead from an assassin's bullet. **20,964**

57 TOYOTOMI HIDEYOSHI (1537-1598) *unifier of Japan*

Contemporaries called him one of the ugliest men alive—but not to his face. Hideyoshi, born to a peasant, was a strong-willed general and no-nonsense ruler who unified Japan by conquest after centuries of tribalism. For these accomplishments he is often compared to Abraham Lincoln (32). He established the institutional framework for the government, economy, and society for Japan's next 250 years. Toyotomi conquered his enemies the old-fashioned way: He killed them in battle, though to those who survived he demonstrated a magnanimity rare for the era. Finally in power at age fifty, he

used the census to keep tabs on his subjects, who were organized into feudal classes and castes from which they could not wander without permission. As much as power, he loved art and ostentation. Gold adorned everything from his chopsticks and bowls to the bathroom walls and roof of his Kyoto castle. Late in his reign getting close to him was dangerous. When he sired a son five years before his death, Hideyoshi ordered the previous heir, his nephew, to commit suicide. **20,963**

58 **FREDERICK THE GREAT** (1712–1786) *the sword of German militarism*

Did King Frederick II of Prussia make Bismarck (118) and Hitler (20) possible? We say yes, so Frederick scores high for lasting influence. Other autocrats used armies to push their neighbors around; Frederick was better at it. He conquered Silesia in his first months in power and spent the next forty-six years creating the efficient army that turned his backwater kingdom into a land-grabbing European power. It took the worst wars in history to wipe this arrogant acquisitiveness from Germany's repertoire. Writer Johann Goethe (131) called the flute-playing, French-speaking, Bach-befriending Frederick the model benevolent despot. Not bad, having Goethe for a reference. But the same Frederick ordered the arrest of Voltaire (36) just for leaving town. Frederick could be kind, the Victorian historian Thomas Macauley (796) wrote. "But under this fair exterior he was a tyrant, suspicious, disdainful and malevolent." Macauley got it right. **20,959**

59 **GEORG WILHELM FRIEDRICH HEGEL** (1770–1831) *philosopher for a dislocated age*

His all-embracing system posited a God-like world-spirit acting through history and guiding human reason. Eggheads like Bergson (890), Dewey (872), Feuerbach, Heidegger (914), Jaspers,

Marx (14), Sartre, Strauss, Toynbee, Veblen, Weber (806), Whitehead, and Whitman (318) all came under his spell. His concepts pulsate through communism, fascism, pragmatism, existentialism, cultural anthropology, and social psychology. Reducing his philosophy to the well-known thesis-antithesis-synthesis formula of the dialectical process is a gross but convenient oversimplification. Historian Carl J. Friedrich commented that the more you read Hegel, the clearer he becomes—"clearer, but not clear." It is heartening to note that upon falling in love with his future bride, Hegel dropped his erudition and wrote love poetry. Of the New World he said: "America is the land of the future in which in times to come world history shall reveal itself." **20,921**

60 **CHU YÜAN-CHANG** (1328–1398) *the first Ming*

Chu Yüan-chang was a starving beggar when a fortune-teller told him to join the fight against China's Mongol rulers. Good advice. Sixteen years later, as head of the rebel army, he defeated the Mongols and became the first emperor of the Ming dynasty, which governed China from 1368 to 1644. Ming craftsmen gave the world exceptional art, but Chu was a cruel paranoid who brooked no limitations on his power. Mentioning the emperor's humble origins was a hanging offense. Bungling bureaucrats were flogged on their bare buttocks with bamboo rods. Harvard historian John Fairbank wrote that Chu concentrated so much power in his hands, nothing could get done. The centralized despotism of Chu and his Ming minions helped China miss the boat of modern development. **20,909**

61 **CHARLES V** (1500–1558) *the emperor who gave it all away*

As Holy Roman emperor, Charles's control in Europe extended from Spain and the Nether-

lands to Austria and the Kingdom of Naples. But the architect of the largest-ever German empire was also its destroyer. His reign was marked by conflicts with French king Francis I over control of Italy, battles against the encroaching Turks, and the start of the Protestant Reformation. By 1552 the empire was crumbling, and Charles, suffering from gout, was in failing health. He abdicated in 1556 and retired to a monastery in Spain. Some might say he dropped out. But casting off the ever-increasing burdens of leadership was an option he'd been contemplating since 1532, when an adviser told him that a ruler who couldn't preserve the peace—or was even an obstacle to it—was obligated to retire.

20,892

62 GEOFFREY CHAUCER (1342–1400) *humanity's poet laureate*

Chaucer's works, with their innovative vocabulary and meter, had a monumental impact on the development of English literature and influenced centuries of writers, including Shakespeare (5). Chaucer was a veteran civil servant, diplomat, and courtier whose career ebbed and flowed with political tides. Privately he was a prolific writer, a learned man with a heightened sense of humor and irony and tolerance for human foibles. His masterpiece is the unfinished *Canterbury Tales*. The plot features a storytelling contest by twenty-four pilgrims journeying to a shrine in Canterbury. Through them we see, as Chaucer always did, the humor and tragedy of the human condition. Our favorite narrator: the lusty Wife of Bath, who cries in Olde English, "Allas! allas! that evere love was synne." To writer C. S. Lewis, "the great mass of Chaucer's work is simply a background to the *Canterbury Tales*, and the whole output of the fourteenth century is simply a background to Chaucer."

20,861

63 LOUIS XIV (1638–1715) *absolute monarchy in its purest form*

King Louis seized personal control of France in 1661. Years of civil strife had left destruction everywhere, and the treasury was empty. But he envisioned a nation of power and grandeur. Within a decade he steered France to industrial revolution, importing thousands of craftsmen to create manufacturing centers. Good thing, too, because Louis decided to build the dream home of all time, the monumentally expensive Versailles palace. Known as the "Sun King" for the brilliance of his court and his support of the arts, Louis considered himself God's representative on earth. But his velvet-slipped feet were made of clay. His greed for land prompted neighbors to forge coalitions that checked his ambitions in two wars. Upon hearing that his fifty thousand troops had been defeated at Blenheim in 1704, Louis wailed, "How could God do this to me after all I have done for him?"

20,850

64 THOMAS JEFFERSON (1743–1826) *author of the Declaration of Independence*

When President Kennedy told a group of Nobel laureates they were the "most extraordinary collection" of minds to grace the White House with the "possible exception of when Thomas Jefferson dined alone," he was going for a laugh. But he wasn't far off the mark. Jefferson provided a liberal vision for the new republic that contrasted starkly with those who sought to create an aristocracy. His was the voice of the people. He championed the "little guy" (read: the colonial yeoman farmer), supported a free press, defended freedom of religion, and sent Lewis (505) and Clark off on their excellent adventure to explore the West. The Founding Fathers' jack-of-all-trades, Jefferson was an accomplished writer, scientist, architect, surveyor, lawyer, and farmer. Besides, anyone who can

turn a phrase like "life, liberty and the pursuit of happiness" gets big points in our book. **20,837**

65 POPE URBAN II (c.1042–1099) *preacher of the Crusades*

On November 27, 1095, the bearded, handsome Pope Urban II stood on a platform in a field outside the east gate of Clermont, France, and exhorted Christian soldiers to take back the Holy Land from Muslims who were mistreating pilgrims. Plus, he added delicately, it would rid Europe of pugnacious knights with nothing to do but hack up their neighbors in silly wars. Let them kill infidels for a change. It was the most effective speech of the millennium; it launched the Crusades, which spanned four centuries and stimulated the cultural intercourse that sped the westward transmission of the Muslims' superior learning. Too bad it also unleashed bestial orgies of butchery and rape on anyone in the Crusaders' paths, including a lot of Christians. Italian merchants made fortunes supplying ships and food to the warriors. And Urban died before news of Jerusalem's capture got back to Rome. **20,822**

66 MARCO POLO (1254–1324) *world's most influential traveler*

Plenty of European adventurers and traders went to Asia in the early centuries of the millennium, but Polo had a publicist. The story of the Venetian's twenty-three-year trip east and his service in the stately court of Kublai Khan (332) was a Renaissance best-seller that stirred Europeans' longing to know about the Orient and its treasures. They read, they dreamed, and some acted on their dreams, most notably Christopher Columbus (2). We know Columbus read the *Travels* because he wrote in the margins of his copy. Polo's ghostwriter was a Pisan named Rustichello who debriefed the traveler while they were fellow prisoners of the Genoese in the 1290s.

Rustichello's embellishments probably insured the book's success, but it was Polo who made the trip that incited his readers' wanderlust. **20,796**

67 ANTOINE-LAURENT LAVOISIER (1743–1794) *creator of modern chemistry*

Lavoisier formulated a theory of combustion, demonstrated the role of oxygen and the principle of conservation of matter in chemical reactions, and established the distinction between elements and compounds. Some say his work in human respiration made him the founder of physiology and biochemistry. His success in increasing crop yields on his farm made him a precursor of the Green Revolution. Somewhere along the line he married a thirteen-year-old girl. Lavoisier was also a public servant whose accomplishments included doubling France's gunpowder production. With powder to spare to ship to the American colonialists, France insured the success of the American Revolution. For all his contributions, Lavoisier was attacked by radicals in the French Revolution and guillotined. "It required only a moment to sever that head," commented mathematician Joseph Louis Lagrange, "and perhaps another century will not be sufficient to produce another like it." **20,768**

68 MAXIMILIEN ROBESPIERRE (1758–1794) *the terror of Europe's Old Regime*

Known as the Incorruptible for his idealism, Robespierre was also a master of intrigue and the fiercest current in the political maelstrom that reshaped the Western world, the French Revolution. A champion of the poor, he declared, "We are the lower class, the scum." Moralistic, he established a "Republic of Virtue." But he smelled conspiracy everywhere and presided over the Terror that lopped off so many French heads with Dr. Guillotin's new instrument. "Without terror, virtue is impotent," he said. In the end,

his enemies, fearful of being "shortened by the national razor," shortened Robespierre. Shot through the jaw in a melee shortly before his execution, the demagogue could utter no speech as the blade fell, only an animal cry that British historian Thomas Carlyle (691) described as "hideous to hear." This lover of philosopher Jean-Jacques Rousseau (19) left behind a harsh legacy: Destroy the past for a glorious future, and you will also, in all likelihood, destroy yourself. **20,719**

69 JOHN CALVIN (1509-1564) Protestant Reformation leader

Born Jean Cauvin in France, Calvin couldn't resist tinkering with his name, much less organized religion. Abandoning Roman Catholicism, he published the most influential treatise of the Reformation, *The Institutes of the Christian Religion*, at age twenty-six. Emphasizing the Bible as sole source of God's law, the *Institutes* became the cornerstone of the Protestant movement. As ruler of Geneva, Calvin instituted an asceticism that inspired the English Puritans and American Pilgrims. He condemned "all injurious persons, adulterers, rakes, thieves, ravishers, the covetous, the drunken and the gluttonous." Calvinism spread across Europe, rivaling Lutheranism. Max Weber (806) attributed capitalism's rise to the new faith's work ethic. For all Calvin's dogmatism, his emphasis on personal responsibility and freedom and his opposition to "unjust" authority contributed to the West's secularization. Calvin, though tormented by ulcerous hemorrhoids and the "wild beast" of his temper, also had a soft side, feeding the poor and remarking, "We are not forbidden to drink wine." **20,711**

70 CHARLES DICKENS (1812-1870) novelist of the emerging industrial age

Dickens's work is marked by rich portrayals of Victorian society, sharply etched characters—

A Christmas Carol's Ebenezer Scrooge, for one—and a crusading spirit for social reform. He was traumatized when his parents forced him to work in a shoe-polish factory. Then his middle-class father was thrown into debtors' prison. Little wonder Dickens frequently put an oppressed child at the center of his novels, including *Oliver Twist*, *Great Expectations*, *Bleak House*, and *David Copperfield*, which are widely read today. Dickens liked to describe himself as "the Inimitable"—a fitting name for someone continually churning out novels, editing magazines, and acting in plays. Ever the entertainer, Dickens craved an audience's adulation. At age forty-six he launched tours through Britain and the United States, reading from his works and acting all the parts. Friend Thomas Carlyle (691) caught his performance in 1863 and told him wonderingly, "Charley, you carry a whole company of actors under your own hat." **20,666**

71 SULEIMAN THE MAGNIFICENT (1494-1566) paramount ruler of the seven-hundred-year Ottoman Empire

To the west, Suleiman conquered Belgrade, expelled the Christian Knights of St. John from Rhodes, annexed Hungary, and built his navy into a Mediterranean power; to the east, he launched campaigns against Persia and conquered Iraq. All this bloodshed! Not to worry; Suleiman was also a patron of the arts and a reformer, known as the Lawgiver for his commitment to justice. No wonder he was called Sultan of the Ottomans, Allah's Deputy on Earth, Lord of the Lords of this World, Possessor of Men's Necks, King of Believers and Unbelievers, King of Kings, Emperor of the East and West, Prince and Lord of the Most Happy Constellation and—last but not least—the Shadow of the Almighty Dispensing Quiet in the Earth. To be

sure, he executed two of his sons for conspiracy, but then, a dad has to show tough love. **20,637**

72 PAUL CÉZANNE (1839–1906) founder of modern art

"He was the father of us all," a group of famous twentieth-century painters of various schools said of Cézanne in a manifesto a half-century after his death. In a thousand paintings and drawings, this self-absorbed Frenchman proclaimed the importance of capturing nature as it really was, and he did so by fusing the formalism of classicists and the color sense of the romantics in an incomparable style. His chief contribution: the notion, implicit in his teachings and his work, that visual artists should be bound only by the limits of their imagination, not by the reality of the objects they depict. The best legacies of Cézanne's genius are his sixty paintings of *Mont Sainte-Victoire* near his home in Aix-en-Provence and his paintings of figures in landscapes, like *The Great Bathers*, which he worked on from 1892 to 1905. **20,632**

73 MURASAKI SHIKIBU (978?–1031?) creator of the novel

Murasaki's *The Tale of the Genji* was the world's first novel and is still considered the greatest work of Japanese literature. Educated beyond feminine pastimes of calligraphy, embroidery, and painting, Murasaki studied literature and the Chinese language. Following the birth of her daughter and the death of her husband, she went to the royal court and began her great work, based loosely on her observations there. At the time Japanese men looked down upon literature written in Japanese, preferring to use Chinese characters. Women, however, were free to write in Japanese. Thus Murasaki wrote her novel, a combination dime-store romance and sweeping family saga of Genji, the charming son of the emperor. Begun in 1002

and finished about 1005, the book was written in fifty-four chapters. Some believe the last chapters were written by someone else, but hey, they said that about Shakespeare (5), too. **20,583**

74 ALEXANDER GRAHAM BELL (1847–1922) inventor of the telephone, which revolutionized personal communication

Prior to Bell's invention, messengers delivered notes from business to business; women spent afternoons visiting and paying social debts; and teenagers were seen, not heard. Enter Bell, from a family of vocal technicians. Bell, who emigrated from Scotland to Canada and then became an American citizen in 1882, taught speech before he began tinkering with sound. Bell hired mechanic Thomas Watson to help translate his scientific knowledge into the mechanics of a telephone. Then, on March 10, 1876, Bell brought his assistant running with his first transmission: "Mr. Watson, come here; I want to see you." Improvements followed rapidly, and Bell Telephone Company was formed in 1877. On the day of his funeral, telephones in North America were stilled for one minute to pay tribute to his genius. Now an average 1.6 billion calls are made in the United States alone every day. **20,581**

75 MARIE CURIE (1867–1934) pioneer of nuclear physics

Curie's dedication to science was so absolute that before her marriage, she asked a friend to find her a wedding dress that was "practical and dark so that I can put it on afterwards to go to the laboratory." Born Maria Skłodowska in Warsaw, she met Pierre Curie when she was studying in Paris. Pierre joined Marie's research project, and they sifted through a ton of soil to isolate a thimbleful of radium. They shared a Nobel Prize in physics in 1903. Marie took a back seat to her husband in the male bastion of the academy. In the laboratory, however, she

reigned. She discovered polonium—named for her native country—and coined the word *radioactive*. The first woman to win a Nobel Prize, Curie won again—in chemistry—in 1913. Ultimately her passion for science was her undoing—she died from anemia caused by overexposure to radiation. **20,572**

76 JOHN ECKERT (1919–1995) *inventor of the first modern computer*

John Mauchly conceived the Electrical Numerical Integrator and Computer (ENIAC) to calculate artillery trajectories for the U.S. Army, but Eckert built it. Weighing thirty tons and containing eighteen thousand vacuum tubes and seventy thousand resistors, ENIAC, which could duplicate twenty hours of human figuring in thirty seconds, used so much power that neighborhood lights dimmed. It also had four thousand red neon tubes. "Every science-fiction machine since has had flashing lights all over it," Eckert marveled. The American duo's hold on the computer crown is not final; some say British mathematician Alan Turing (445) should share it for a machine he developed in 1943. But Eckert dismissed the claims of another pretender, American John V. Atanasoff, for a vacuum tube he built in the 1930s, saying, "He never really got anything to work." ENIAC worked, and the computerization of the world followed. **20,561**

77 FYODOR DOSTOYEVSKY (1821–1881) *the maker of modern literature's antihero*

Salvation through suffering was the credo of Russian Dostoyevsky's tragic life and dark novels. He is considered one of the greatest novelists in history. In 1849 the young writer was arrested with other socialists and charged with treason. He was about to be shot when his sentence was commuted—the czar's twisted intent from the start. The episode scarred Dostoyevsky for life, and he developed epilepsy. Exiled for four years

to a Siberian work camp, his only book was the Bible and his only company, fellow inmates he called "the soul of Russia." They inspired his later novels, *Crime and Punishment*, *The Possessed*, and his masterpiece, *The Brothers Karamazov*. Dostoyevsky's flawed heroes are consumed by a tragic sense of life and search endlessly for truth and self-fulfillment. Through these works he paved the way for the twentieth century's existential and surrealist literary movements. **20,421**

78 POPE INNOCENT III (1160–1216) *champion of papal power*

The deeply religious Italian nobleman Lotario di Segni had a lofty vision of pope as Vicar of Christ, "set midway between God and man, below God but above man." A master politician, he intervened in turf battles in Germany, England, and France, arguing that only he could determine the best leader to defend church interests. By 1215, through his brilliant statesmanship, Christendom extended from Greenland to Syria. That same year he convened the reform-minded fourth Lateran Council—the climax of the medieval papacy. His reign also had darker sides: the first repressions of heretics and the Fourth Crusade, which conquered Constantinople in 1204. But peace was more his style. He died on a peace mission to the Italian town of Perugia. While his body lay in state, thieves stripped it of vestments. At burial Innocent's corpse wore only the simple garments of the poor. **20,418**

79 FREDERICK DOUGLASS (1817–1895) *abolitionist leader*

A fugitive slave in the North, Douglass galvanized audiences with stories of his youth in bondage and his antislavery message. But he omitted key details—including his real name, Frederick Augustus Washington Bailey—for fear his master would track him down. Self-educated and bril-

liant, Douglass was so eloquent that people began doubting he had been a slave. He felt compelled to write his autobiography, *Narrative of the Life of Frederick Douglass*, and reveal the facts. When the book appeared in 1845, Douglass left for Europe on a two-year speaking tour. He returned with enough money to buy his freedom and launch his own newspaper to press for abolition through political action. During the Civil War Douglass persuaded a reluctant President Lincoln (32) to declare all slaves free and conscript them to fight for the Union. But Douglass was deeply disappointed with Reconstruction's failure to bring political and social equality to blacks. **20,401**

80 J. ROBERT OPPENHEIMER (1904–1967) director of the first atomic bomb project

His genius at getting other geniuses to work together made possible the awful weapons that finished World War II with climactic bangs and made the world forever unsafe. Oppenheimer was a polymathic physics professor whose best theoretical work was behind him when the U.S. Army picked him to lead the construction of the atomic bomb. In three years he completed the Manhattan Project by making the right decisions and by coddling, cajoling, and cheerleading his battalion of former and future Nobel laureates. Edward Teller, who later built the first H-bomb, called Oppenheimer the best lab director he ever knew. Oppenheimer was an unlucky gambler, though. In a ghoulish lottery, he bet ten dollars that the test blast on July 16, 1945, would equal 300 tons of TNT; it was 18,000. He had uncorked an evil genie. If mankind lets it loose again, good-bye next millennium. **20,397**

81 JOHN STUART MILL (1806–1873) promoter of individual rights

Mill's writings on philosophy, economics, political science, logic, and ethics deeply impressed

contemporary thinkers. His essay "On Liberty" is the finest argument for the rights of the individual versus the state. Mill was influenced by the theory of utilitarianism formulated by his father, James Mill, and family friend, Jeremy Bentham (383). They believed that the morality of an action derives from its positive or negative outcome and that all legislation should achieve "the greatest good for the greatest number." But Mill also believed that minorities must never be subjugated to the whims of the majority. He advocated unionism, proportional representation, and women's rights. Prodded by his authoritarian father, Mill was reading Greek at age three, Latin at eight, and writing a history of Roman government at age eleven. He later observed: "I never was a boy, never played at cricket; it is better to let Nature have her own way." **20,375**

82 JOSEPH STALIN (1879–1953) monster

If ever there was a case against child abuse, Stalin, beaten as a boy by his drunken father, is it. Killing was his sport. Only Hitler (20) ever got the better of him, and only because, as one pundit remarked, Hitler double-crossed him before he could double-cross Hitler. The impact of this evil genius on history was stupendous: He collectivized Soviet agriculture (twenty million dead of starvation); helped defeat Nazi Germany; seized half of Europe; sent millions to their deaths in slave camps; industrialized the Soviet Union; and made it a nuclear power that fought a forty-five-year cold war with the West. What good can be said of this Georgian peasant who refused to attend the funeral of his mother, a God-fearing washerwoman, and rejected a German offer to return his son from a prisoner-of-war camp? This, at least: He destroyed Communism's promise and sealed its demise. **20,361**

83 **JOAN OF ARC** (1411?–1431) *heroic patron saint of France*

French peasant Jeanne d'Arc never learned to read or write, but she was overcome by the "voices" of saints, who told her to free France from English rule. Perhaps the original "aggressive female," Joan dressed as a man and convinced the dauphin to commission her an army of about four thousand men. By sheer persistence, some may say bullheadedness, she wore down the English at Orleans and triumphantly stood by the side of Charles VII at his coronation. It was all downhill from there. She was captured, sold to the English, and burned at the stake at the age of twenty. The national hero of France, however, has been immortalized in story, history, and art. She was canonized a Catholic saint in 1909. **20,298**

84 **FRANCIS BACON** (1561–1626) *formulator of the scientific method*

The learned Bacon rose to attorney general, then lord chancellor under James I (879). All the while he continued writing, publishing his masterful *Essays* in 1597. His brilliant political career ended in disgrace in 1621 for bribe taking. Bacon devoted the next five years to his beloved philosophy; he planned a major work but completed only two parts, *The Advancement of Learning* and *Novum Organum*. His major contribution: proposing that inductive logic—the process of reasoning from the specific to the general—be used for scientific discovery, an approach embraced by modern science. Bacon's enthusiasm for his scientific method was his undoing. One wintry day he stopped his coach outside London, inspired by the snow-covered fields to think snow might preserve food. At a farmhouse he bought a chicken, had it slaughtered, then stood outside to pack it with snow. His resulting chill led to fatal pneumonia. **20,273**

85 **FILIPPO BRUNELLESCHI** (1377–1446) *inventor of linear perspective*

People who erroneously credit the invention of perspective to fourteenth-century artist Giotto (219) are merely fooled by his perfect eye. Giotto did indeed pay attention to space and form, but it came to him naturally. The Italian architect Brunelleschi, however, put it down on paper. Brunelleschi worked as a goldsmith in Florence but turned to architecture when he lost a competition to create a set of golden church doors. He experimented to create depth on a flat surface, articulating what the eye already knew: that parallel lines seem to converge at some "vanishing point" on a canvas and that the closer you are to an object, the larger it appears. Brunelleschi spelled out the rules to create a three-dimensional flat surface, and his ideas were embraced by the art world. Now his concept of points and lines forms the foundation of art lessons even on an elementary level. **20,263**

86 **ELIZABETH CADY STANTON** (1815–1902) *founder of the American women's rights movement*

If Cady Stanton hadn't been so eccentric, cantankerous, and aggressive, she probably would have ended up with her picture on the dollar coin and with all the credit for starting the women's rights movement. As it was, she organized the first women's rights conference in her hometown of Seneca Falls, New York, in 1848. Then she spent the rest of her life passionately arguing for woman suffrage and equal legal and work rights. She raised the ire of almost everyone when she rewrote the Bible from a woman's perspective. She made many enemies with her single-minded approach, which is probably why the more congenial Susan B. Anthony (139) is generally but wrongly credited as the sole force behind the movement. Cady Stanton died eighteen years before women

won the vote and decades before they reached the full legal equality she championed. **20,196**

87 **VLADIMIR K. ZWORYKIN** (1889–1982) *television pioneer*

Working for Westinghouse Electric Corporation, the Russian-born engineer invented the first electronic television system with his iconoscope camera tube and kinescope picture tube, patented in 1923 and 1924. Despite later refinements, the modern TV picture tube remains essentially his kinescope. But in the 1920s Zworykin's inventions left Westinghouse bigwigs unimpressed. Their loss was RCA's gain. RCA hired Zworykin in 1929, named him director of electronic research, and used his system to develop their own—investing \$50 million “before we ever got a penny back,” grumbled RCA legend David Sarnoff (830). Fifty years later Zworykin told interviewers he never expected TV to have such global impact. But the man who was the father of television technology disowned his electronic offspring. He'd envisioned television for education, not mindless entertainment. “I would never let my children come close to this thing,” he said. “It's awful.” **20,163**

88 **GOTTFRIED WILHELM LEIBNIZ** (1646–1716) *inventor of calculus and symbolic logic*

The brilliant German entered the University of Leipzig at age fifteen and graduated from law school at twenty. His fellow philosophers drew from independent incomes, but Leibniz had to earn his own way. He was at various times historian, diplomat, engineer, scientist, and inventor—whatever role his royal benefactors required. As philosopher, Leibniz criticized the theories of Descartes (25) for damaging faith in God. Leibniz held that the basic components of the universe are metaphysical points he called “monads”—isolated and of infinite number but together forming an

ordered plan. He argued this harmony showed God had created “the best of all possible worlds”—a notion Voltaire (36) satirized in *Candide*. As mathematician, Leibniz discovered calculus and published his results three years before Isaac Newton (6), who maintained he had thought of it first. Naturally, the two never hit it off. **20,132**

89 **WILLIAM LE BARON JENNEY** (1832–1907) *architect of the skyscraper*

Next time you're waiting for an elevator to the thirtieth floor or dodging neck-craning tourists on the street, remember Jenney, the American civil engineer and architect who designed the Home Insurance Company Building in Chicago, built in 1885. Some quibble that the skyscraper's forerunner came fourteen years earlier, with the Equitable Life Insurance Building in New York. Hogwash. Jenney's our man. His building was only ten stories high but was the first to have its weight supported by an iron and steel framework—not the usual load-bearing walls. Ever since, carving space from the sky has soared in crowded cities, and the skyscraper has become a symbol of the twentieth century. The current tallest: the 1,535-foot-high Oriental Pearl Television Tower in Shanghai. **20,101**

90 **EDWARD JENNER** (1749–1823) *inoculator of nations*

If Jenner were a researcher today, he would be a pariah. After all, his guinea pig was an eight-year-old boy, who was injected first with an untested vaccine, then with smallpox. The experiment ended happily enough—Jimmy Phipps never got smallpox, and Jenner discovered a way to inoculate people against the world's most dreaded disease. Up until Jenner's discovery in 1796, not only did smallpox kill thousands, but its survivors were marked for life with disfiguring scars.

Jenner had observed a relationship between a mild disease that plagued milkmaids—the cowpox—and the deadly smallpox. Noting that milkmaids rarely came down with smallpox, Jenner developed a serum using cowpox sores, despite criticism and roadblocks from the medical establishment. He named his process *vaccination* from the Latin word for cow, *vaca*, in tribute to the source of his discovery. **20,093**

91 **QUEEN VICTORIA** (1819–1901) *the mother of all monarchs*

Victoria of England was so dominant a personality for two-thirds of a century that her name came to represent the era when Britain had an empire and society adhered to an almost fanatical priggishness. Victoria's advice to her daughter about the duties of the marriage bed reflected the sexual repression of the time. "Lie still, and think of the empire," she said. Indeed, the empire was vast—spanning the globe at a time when England was unchallenged as a world leader. Britain's power eventually faded like the stiff chintz curtains from a Victorian parlor, but not until after her sixty-three-year reign was over. Victoria fell madly in love and married her cousin Albert and, despite her apparent distaste for marital obligations, gave birth to nine children. Their marriages to royalty throughout Europe ensured that, at least for another generation, the sun didn't set on the British Empire. **20,028**

92 **BABUR** (1483–1530) *the Muslim conqueror of India*

His name means "lion" in Turkish, and this direct descendant of the Mongol warriors Genghis Khan (43) and Tamerlane (511) had their fighting spirit in his genes. At the age of eleven he inherited an Afghan principality, but it was too small for his ambitions, and for the next

three decades his Muslim armies raided southward into India in search of gold and land. At the climactic battle of Panipat in 1525, the Hindu enemy, even with its 100,000 men and 100 elephants, was no match for Babur's 12,000 veterans. At his death all of northern India was under his power. The Mughal empire he created—and that his grandson Akbar (148) expanded—held sway in India until the British swept it aside in 1857. Besides war, Babur loved beautiful gardens, art, and music. He also indulged in alcohol, a habit that overcame his resolution to live like a good abstemious Muslim. **19,967**

93 **CHU HSI** (1130–1200) *most influential Chinese philosopher of the millennium*

Chu Hsi essentially reinvented Confucianism to his liking, in some cases using texts that were not written by Confucius or members of his school. By virtue of the clarity of his ideas and his high moral purpose, his brand of Confucianism dominated Chinese intellectual life for centuries. He rejected the Buddhist doctrine that the world is an illusion, saying the physical universe is upheld by the same moral law that controls human affairs. "Heaven is law," he wrote. He believed man's nature was forged in Heaven and is thus incorruptible, though it can be clouded like a pearl in a bowl of dirty water. A high official in the Sung dynasty, Chu Hsi preached benevolence as the loftiest virtue, denounced corruption, and was active in famine relief. Late in life, though, enemies accused him of joining in a "rebel clique of spurious learning." **19,944**

94 **PHINEAS T. BARNUM** (1810–1891) *patron saint of sales and advertising*

If people bought only what they needed, global trade would collapse. From Podunk to Pakistan,

the world's billions are gobbling up merchandise of dubious value—rap CDs and radar detectors, Pepsi and popcorn, Milky Ways and miracle bras—thanks to demand created by advertisers and salesmen using techniques perfected by Barnum. He made his fortune in 1835, charging customers to meet George Washington's (22) 161-year-old ex-nurse. Who believed it? Nobody. Who bought the tickets? Everybody. His museums, circuses, sideshows, and presentations of stars like "Swedish Nightingale" Jenny Lind made him the model for modern marketing. "There's a sucker born every minute," he supposedly said, and without the suckers created by the Barnums in three-piece suits in modern corporate boardrooms, the world economy would be very different today. **19,921**

95 GUGLIELMO MARCONI (1874–1937) radio man

In the 1890s, a Bolognese estate rang with Papa Marconi's pleas: Guglielmo! Stop fiddling with those electric gizmos and do your homework! In the attic, on the lawn, teenage Marconi was trying to build machines to exchange wireless telegraph signals using the electromagnetic waves that Heinrich Hertz (453) had discovered a decade earlier. Marconi got his breakthrough when he was twenty-three. The radio company he established in his mother's native Britain was a success, he won the Nobel Physics Prize at age thirty-five, and he might have invented microwave ovens and radar, too, if he had lived longer. Broadcasting became an entertainment and advertising medium in the 1920s, and radio continues to shrink the global village. In 1995 the British Broadcasting Corporation's forty-one-language world service had 160 million regular listeners in a hundred countries, including the United States, where there are now 1.2 radios for every man, woman, and child. **19,918**

96 MARSILIUS OF PADUA (c.1270–c.1342) sower of the seeds of modern politics

We traced the development of secularism, nationalism, and popular sovereignty, and all are rooted in Marsilius of Padua. Sixteenth-century reformers read his tract, *Defensor Pacis*, which called for a church of poverty-stricken priests subservient to kings, who in turn would be subject to popular will, maybe even elected. This was radical stuff for the fourteenth century, and Holy Roman emperor Louis of Bavaria treated Marsilius like a heretic—at first. Then Louis realized that the book justified his side in a struggle with Pope John XXII; the grateful sovereign rewarded Marsilius by making him archbishop of Milan. John Wycliffe (337), Martin Luther (3), and Henry VIII of England (100) studied *Defensor Pacis*, but it's a tough read today. We take English philosopher Bertrand Russell's (593) word for its importance. **19,842**

97 DESIDERIUS ERASMUS (1466?–1536) literary light of the Renaissance

Erasmus's literary accomplishments range from the great *Adagia*, a collection of proverbs from classical times, to his satirical masterpiece, *The Praise of Folly*. His lasting importance, though, lies in his Latin translation of the New Testament from the original Greek. Some consider him the first New Testament scholar. Though critics discerned impiety in this Catholic priest's disdain for religious dogmatism, he remained faithful to Rome, earning Martin Luther's (3) wrath for his admonitions to return to the fold. Europe's crowned heads vied to attract him to their courts, but he loved England most. In *The Praise of Folly*, written as a distraction, Folly complains of men's ingratitude: though all cherish her, "not a one has emerged in all the ages to celebrate the praises of Folly in a grateful oration." Erasmus

strove to spread the Gospel among common folk, declaring, "Would that the farmer might sing snatches of Scripture at his plow." **19,810**

98 **ALEXANDER VON HUMBOLDT** (1769–1859) *universal scientist*

His six-thousand-mile expedition through the forests of Latin America—where he marveled at "the stupendous display of wild and gigantic nature"—laid the groundwork for physical geography and biogeography. Along the way Humboldt dissected a twelve-foot crocodile and ate wild cacao beans to survive. Botanist, geographer, geologist, anthropologist, and astronomer, Humboldt even invented a system for delivering mail along wires slung from one church steeple to the next. In his lifetime he collected sixty thousand botanical specimens and identified 3,500 species. He spent his old age publishing his findings and was working on the final volume of his encyclopedic *Cosmos* when he died at age ninety. American philosopher Ralph Waldo Emerson (504) called him "one of the wonders of the world, like Aristotle, like Julius Caesar, who appear from time to time, as if to show the possibilities of the human mind." **19,777**

99 **MARGARET SANGER** (1879–1966) *birth control's evangelist*

In the early nineteenth century women had an average of 7.04 children. Mothers often died in childbirth or languished afterward in depression. Sanger, the sixth of eleven children, was radicalized by her mother's early death, her own difficulty in delivering her three children, and her work as a New York tenement nurse. When a doctor told one impoverished woman that the only way to avoid another pregnancy was to make her husband sleep on the roof, Sanger rebelled. She wrote extensively about "birth con-

trol," a term she coined, and was jailed in 1916 after she opened America's first birth control clinic. She persisted, organizing many procontraception groups, including Planned Parenthood in 1942. In time Sanger's message became accepted wisdom, and birth rates plummeted to about 2.2 children per woman. Sanger's critics today note that she supported forced sterilization of institutionalized adults. But like her or not, she makes our list for giving modern women the knowledge and tools to control the size of their families. **19,769**

100 **HENRY VIII** (1491–1547) *England's first Protestant king*

"How ridiculous, that the headdress of a pope governs the fly of a prince." So said eighteenth-century philosopher Voltaire (36), and Henry thought so, too. When the pope wouldn't let Henry divorce Queen Catherine (852), the king abolished Catholicism in England. That makes him a central figure in the history of England and the Protestant Reformation; we would rank him even higher had he been motivated by ideology, not lust and longing for a male heir. He was an effective ruler in the sixteenth-century mode—literate, energetic, and a practitioner of decapitation as a way of giving unwanted courtiers the pink slip, as humanist chancellor Thomas More (345) discovered when he supported the pope. Two of Henry's six wives and More's replacement, Thomas Cromwell, fared no better. Cromwell was axed for arranging Henry's marriage with Henry's terminally dowdy wife number four, Anne of Cleves. Lucky for Anne, Henry merely divorced her. **19,751**

Scan the next hundred entries, and you'll see that inventors and scientists steal the show. Look closely, and you may detect a pattern: Early breakthroughs were but the building blocks for future explorations. This led us to a quandary: Do we give more credit to the brain behind the idea or to the genius who applied it? In the end, we decided to rank doers over dreamers.

Take the automobile. Frenchman Alphonse Beau de Rochas envisioned a more efficient gas-fueled internal combustion engine with a four-stroke system. He thought about it and wrote about it, but he never built it. That task fell to Nikolaus Otto, inventor of the famous Otto Silent engine. Tailgating him is his fellow German Carl Benz, the entrepreneur who put the parts together—the engine under the hood, the chassis mounted on four wheels—and sold the first cars to a clamoring public.

The evolution of air travel is another case. In less than a hundred years, we've graduated from the Wright brothers' primitive biplane kites to supersonic airliners that can whisk passengers between New York and Paris in the time it takes to eat a five-course meal. German engineer Otto Lilienthal gets a high rating in our book because his fundamental research into gliders made flight

possible. But the Wright brothers soar even higher because they made the pioneering flight.

While the Wrights took to the skies and Otto and Benz took to the road, American geneticist James Watson traveled another, interior route. Drawing on nearly a century of studies into the riddle of life, Watson discovered that the very structure of the molecule of heredity, DNA, forms a double helix. Yet his achievement, great as it was, was but one step on a path started by Moravian monk Gregor Mendel, who cultivated peas to unearth the keys to heredity, and continued by Thomas Hunt Morgan, who bred fruit flies to describe the link between genes and chromosomes.

It's fitting then that so many of these explorers land near the top of our roster. After all, their theories, experiments, and inventions have revolutionized our lives.

101 **PETRUS PEREGRINUS** (fl.1200s) *chronicler of the compass*

With its wobbly needle suspended in water, distinguishing north from south and east from west, the magnetic compass served as primitive radar. It gave sailors the nerve to venture into uncharted seas when shorelines or stars couldn't guide them. Columbus (2) used it to sail to the New World; Da Gama (125) used it to navigate to India. We're not sure who invented it. Some say Hannibal in 203 B.C., others say the Chinese in the 1100s. With no particular point man in sight, we'll choose French Crusader Petrus Peregrinus. During the siege of Lucera, Italy, in 1269, he wrote the first detailed description of the compass in his remarkable *Epistola de Magnete*. Maybe he didn't create it, but he was the first to explain its use. Peregrinus's writings were beacons in medieval experimental research and steered the way to modern scientific methodology. **19,736**

102 **OTTO LILIENTHAL** (1848–1896) *pioneer of flight*

Yes, Wilbur and Orville (23 and 24) were first to get off the ground in a powered plane, but Lilienthal gave his life for flight seven years earlier. As his gravestone memorializes: "Sacrifices have to be made." Before his death in a glider accident, the German engineer led the race to soar with the birds. The Wright brothers relied heavily on his research. He spent years observing birds in flight, studying their thrust and the airflow around them. He applied that information to his flying contraptions. His glider, with a body harness for the pilot, was reminiscent of a five-hundred-year-old Da Vinci sketch. Lilienthal survived one crash because he equipped his glider with a shock absorber. His detailed description of the crash helped future researchers, including the Wrights, prevent the tendency of a glider or a

plane to nosedive. Lilienthal wasn't so lucky the second time he went down. **19,731**

103 **FATHER BERTHOLD SCHWARTZ** (fl.1300) *legendary inventor of the gun*

How legendary? One historian declares that proving who invented the first cannon is impossible. Yet we'll go with scholars who target early fourteenth-century monk Berthold Schwartz, the only candidate with a name. Explosive powder was invented by the Chinese in the tenth century and was used to fire arrows by the Arabs in the thirteenth. But guns—metal pumping metal—debuted in Europe. Whereas cannons didn't exist in 1300, they thundered in the siege of Metz by 1324 and were blowing up people throughout the civilized world by 1350. So a dubious thank you, Father Schwartz, for the greatest leap in the technology of mass slaughter since the spear. **19,700**

104 **GREGOR MENDEL** (1822–1884) *dominant force in genetics*

A Moravian monk, Mendel tended a garden in the monastery grounds and experimented with plants, primarily the pea. Over seven years he crossbred thirty thousand plants, noting patterns in coloring, seeds, and stem lengths. Based on this data, he theorized that while we inherit an equal number of characteristics from our parents, some characteristics are dominant and others are recessive. Mendel showed how his theories of inheritance work through simple mathematical laws. He told his local scientific society, but hardly anyone else, about his findings. Modest Mendel wrote only two papers, dismissing his studies as an isolated experiment. Thirty-four years later three European botanists with a similar thesis were chastened to learn that Mendel had had it first. His discovery fueled the development of genetics after 1900. Today students around the

world recreate his experiments in science classes to understand the basics of heredity. **19,689**

105 NIKOLAUS OTTO (1832-1891) engineer with drive

There are thinkers, and there are doers. Otto was the latter, a German engineer who took Frenchman Alphonse Beau de Rochas's groundbreaking theory on the ideal gas-fueled internal combustion engine and, fourteen years later, in 1861, made it real. This first practical alternative to the steam engine was the most significant invention in the history of the automobile. Before then, gas engines had relied on a less-than-efficient two-stroke cycle that basically drew in gas, ignited it, and discharged exhaust. Very sloooooow going. Beau de Rochas envisioned a four-stroke system with pistons pumping four times—fast—to compress the fuel-air mixture before ignition. He patented the plan but never built the contraption. Otto did and met success. His firm, Otto and Langen, produced and sold nearly fifty thousand Otto Silent engines in seventeen years, then began to manufacture in the United States in 1878. These engines were forerunners of the gasoline-fueled internal combustion engines used today in most cars and airplanes. **19,654**

106 CHARLES-LOUIS MONTESQUIEU (1689-1755) democracy's tutor

If you read nothing else in *Spirit of the Laws*, his gift to human liberty, read chapter 6 of book XI, which begins: "In every government, there are three sorts of power. . . ." This theory of the separation of power into executive, legislative, and judicial branches inspired the Constitution of the United States and the Declaration of the Rights of Man in France. Montesquieu based his doctrine on his observations of British politics, which he traced to ancient Germany. Thus, "This beautiful

system was invented in the woods," he said.

Spirit of the Laws, a probing treatise on politics that rivals the work of Aristotle, also discusses the impact of climate on culture. As Yankees, we applaud his perceptiveness: "If we travel North, we meet with people who have few vices and a great share of frankness. If we draw near the South, we fancy ourselves entirely removed from the verge of morality." **19,651**

107 ANTON VAN LEEUWENHOEK (1632-1723) macro figure in microbiology

Microscopes were around before Leeuwenhoek, but he perfected the art of lens-making and showed the world how these instruments could be used for scientific research. He focused his 300-power microscopes on blood, sweat, tears, spit, spices, semen, vinegar, tooth tartar, bees' eyes, flea heads, feathers, hair, and anything else he could slice thin. Then he reported his observations to the Royal Society in London so others could expand his work. Anyone who has endured an acquaintance's bad breath will appreciate what Leeuwenhoek reported first: "There are more animals living in the scum of the teeth than there are men in a whole kingdom." He identified thousands of one-celled animal species lurking in dots of marsh water and described how they were influenced by other "animacules" that we now call bacteria. **19,643**

108 PARACELSUS (1493-1541) medicine man

Philippus Aureolus Theophrastus Bombast von Hohenheim—the full name of this Swiss Renaissance physician—cast off the accumulated superstitions of the ages and established the role of chemistry in medicine. At the age of fourteen he set off across Europe seeking wisdom, and within five years he had studied at the universities of Basel, Tübingen, Vienna, Wittenberg, Leipzig,

Heidelberg, and Cologne. But the medical scholarship he found there was based more on ancient texts than on scientific observation, and he concluded that higher education was dominated by "higher asses." Instead, he sought folk remedies for disease and as a result developed numerous drugs for previously hopeless conditions, including a mercury treatment for syphilis remarkably similar to the cure discovered four centuries later. Likewise, Paracelsus concluded that a miners' disease of his era resulted from inhaling noxious fumes, not from the anger of "mountain spirits." **19,627**

109 **CARL GAUSS** (1777–1855) *princely mathematician*

Gauss's copious contributions to the science of numbers, from the discovery of space's curvature and the description of the bell curve to the invention of the heliotrope and his insights into algebraic equations, earned him the nickname of "prince of mathematicians" and a place close to Newton (6) and Leibniz (88) in the millennium's pantheon of mathematical geniuses. A child prodigy, he figured out at seven the formula for calculating the sum of any series of numbers, and he wrote the seminal *Disquisitiones Arithmeticae* at twenty-four. We confess our fondness for this German bricklayer's son, not for his precocity but for his serenity in letting others take credit for his discoveries if he was dissatisfied with his own proofs. Though he called mathematics "the divine science," his interests ranged widely, and he once proposed a scheme to plant geometric swaths of forest in Siberia to alert extraterrestrials to earthly intelligence. **19,626**

110 **JAMES WATT** (1736–1819) *inventor of a commercially viable steam engine*

A quick quiz: Watt scientific genius triggered the Industrial Revolution? That's right—James Watt,

who as a child liked nothing better than tinkering at his own forge in a corner of his father's workshop. Yes, there were other steam engines—Thomas Newcomen, for example, built one in 1711, and Thomas Savery had patented one in 1698. But remember, if theirs had been so great, then we'd be buying light bulbs with 100 Newcomens or Saverys. Watt, whose name today represents the fundamental unit of electrical power, worked in a lab making scientific instruments. He built a steam engine, patented in 1769, that could be applied to specific tasks. His helped drain a mine and then transformed the cotton and woolen mills. The secret to his engine was his "condenser," a gadget still in use. He also coined the term "horsepower" to describe the capabilities of his engines. **19,607**

111 **WILLIAM THOMSON** (1824–1907) *physics phenomenon*

To be sure, Lord Kelvin—his aristocratic title—doesn't leap off the lips the way Newton's (6) and Einstein's (17) names do. Yet he was one of the sharpest scientific minds of his century. A pioneer of physics specializing in thermodynamics, he helped establish the law of the conservation of energy, advanced understanding of electricity and hydrodynamics, and was an authority on underseas telegraphy. He also inspired the Kelvin thermometer for temperature readings. Like most overachievers, he started young, enrolling in college at ten and publishing his first treatise at sixteen. Like many geniuses, he had a towering ego. C. P. Snow, the author, remarked wryly, "Lord Kelvin announced around 1904 that physics had now come to an end—presumably, with himself." Armchair intellectuals mock his miscalls: "heavier-than-air flying machines are impossible"; "radio has no future"; "X-rays are a hoax." **19,598**

112 PETRARCH (1303-1374) first Renaissance scholar

Petrarch revived the great texts of ancient classical culture, which he regarded as history's premonition of Christianity. The innovativeness and vernacular power of this Italian's lyric poetry and the perfection of his sonnets have earned him the sobriquet of first modern poet. Petrarch is famed for his chaste love of the mysterious Laura, apparently a local housewife named Laura de Noves. Smitten with longing for her from the time he first saw her in an Avignon church on April 6, 1327, until she succumbed to the Black Death exactly twenty-one years later, Petrarch ultimately concluded that he must abandon his obsession with Laura and give himself over to God. Yet his passion for her haunts us still:

*a heavenly spirit, a living sun,
was what I saw; now, if it is not so,
the wound's not healed because the bow grows slack.*

19,542

113 WILLIAM TECUMSEH SHERMAN (1820-1891) total warrior

Tecumseh was Sherman's birth name, but his adoptive father tagged him William, a name befitting a Christian. Some Christian. Sherman ordered America's Union armies marching through the South to destroy crops, shell civilians, and burn Atlanta. That helped the North win the American Civil War, but it made Sherman's name synonymous with cruelty in the South. He claimed he hated war. "It is all hell," he said. American military doctrine has embraced his credo: Live in peace, but if a bully picks a fight, pound him into the ground. On Christmas Eve 1864, contemplating his attack on South Carolina, he wrote: "I almost tremble at her fate but feel that she deserves all that seems in store for her." We rank him high for innovat-

ing lightning thrusts by mobile armies living off the land. The same strategy, with modern weapons, has a name: blitzkrieg. 19,541

114 CARL VON CLAUSEWITZ (1780-1831) soldier who wrote the book on war

Clausewitz was a long-dead nobody until the 1880s, when someone asked Prussia's brainiest general, Helmuth von Moltke, to list the books that most influenced him. Moltke's answer: Homer, the Bible, and Clausewitz's obscure, posthumously published *On War*. In this tome Clausewitz distilled thirty-nine years of military experience and came to the conclusion that even peacetime nations should organize massive well-trained armies of regiments ready for use as instruments of policy. That's exactly what Moltke and his ilk did in the decades before World War I, making Clausewitz the ideological father of that conflict. In his thirties Clausewitz fought alongside Cossacks, whom he reviled as cowards. He died in Europe's last great cholera epidemic, having survived the Napoleonic battles of Jena, Borodino, and Waterloo, where men died like scythe-cut wheat. 19,538

115 IGNATIUS OF LOYOLA (1491-1556) founder of the Jesuits

How apt that the metaphor of Catholics as "soldiers of Christ" was coined by a soldier of Spain. Born Don Íñigo López de Recalde in the Basque region, Ignatius pursued a military career until he was wounded by a cannonball during the war with France. During his lengthy convalescence he found God while reading a book about the lives of the saints. Poorly educated, he went to school with little children to prepare himself for study at university. Still, he envisioned a religious order that was modeled after an army and dedicated to living as teachers in imitation of the life of Christ. Ignatius created his military-style

Society of Jesus and ruled the order as its general. Although Ignatius started his Jesuits with just six followers, today it is the largest single Catholic religious order, made up of teachers, missionaries, scientists, and scholars. **19,485**

116 OKUBO TOSHIMICHI (1831–1878) *savvy and courageous bureaucrat who helped create modern Japan*

"Courageous bureaucrat" sounds like an oxymoron, but not at the birth of the new Japan. Okubo needed the bulldoggedness of a Churchill (38), the iron will of a Bismarck (118), and the patience of a Mandela (354) to lead the local and imperial officials in wrenching control of Japan from feudal lords. The son of a minor warrior, Okubo was an aide to the ruler of the province of Satsuma when he realized Japan would be forced to kowtow to established nations unless the government were organized along Western lines. He and his henchmen rallied around the youthful Meiji emperor in 1868, suppressed the feudal lords, and forged a national economy and army. With dizzying speed Japan was transformed from a backwater to an industrial world player. It was the kind of group effort Japan is famous for, but Okubo stood out, which cost him his life. He was murdered by a Samurai swordsman who opposed the nationalist movement. **19,412**

117 ISABELLA I (1451–1504) *New World visionary*

Christopher Columbus (2) made the great voyage, but Queen Isabella paid for his ticket. She was the only Spanish royal to believe in Columbus's plan to sail west through the "Atlantic abyss" to reach the treasure-laden East. Okay, so she strung him along for six years until court experts came around to her way of thinking. But Isabella gave Columbus the opportunity of the millen-

nium. The explorer won the staunchly Catholic monarch over by promising to corral passels of heathens ripe for conversion. Ultimately, though, the queen of Castile proved to have more scruples than her protégé: she ordered the release of the natives Columbus had enslaved. After Isabella died, Italian humanist Pietro Martie mourned, "The world has lost its noblest ornament . . . she was the mirror of every virtue, the shield of the innocent, and an avenging sword to the wicked." Ornament or not, Isabella was also responsible for making the Inquisition more deadly by expelling the Jews from Spain, one of the darkest hours in that religion's history. **19,407**

118 OTTO VON BISMARCK (1815–1898) *unifier of Germany, master of Realpolitik, forerunner of Hitler*

Known as the Iron Chancellor for his vow to achieve his aims through "blood and iron," Bismarck dominated Europe in the second half of the nineteenth century after winning wars he provoked with Denmark, Austria, and France, then pursuing secret alliances that many blame for World War I. He scorned moralistic namby-pambies, comparing a diplomat with principles to "a man who attempts to walk through a dense forest with a long pole clamped horizontally between his teeth." At home he flouted German laws, militarized society, jailed opponents, censored newspapers, and fought the Catholic Church. King William I couldn't control him. For all his arrogance, Bismarck industrialized Germany and, attempting to trump the socialists, introduced the world's most advanced social welfare system. **19,397**

119 MICHAEL FARADAY (1791–1867) *sparkplug of electrical theory*

Like an undefeated *Jeopardy!* champion, Faraday absorbed trivia while he apprenticed as a book-

binder in London. In 1812 he attended a scientific lecture series, took copious notes, bound them (his training came in handy here), and studied. He secured a job in a laboratory and began his own work in 1825. Faraday explained the concept of force, discovered electromagnetic rotation and induction, described the "Faraday effect," formulated Faraday's law, and laid the foundation for field theory. His discovery of electromagnetic induction had practical applications in industry. When Faraday's work culminated in a radical theory of electricity in 1838, no one paid attention—his ideas were so contrary to prevailing beliefs, they were ignored. Although he turned out to be right, at the time even Faraday seemed unwilling to promote his theory. A year later he suffered a nervous breakdown and never recovered his genius. **19,388**

120 FLORENCE NIGHTINGALE (1820-1910) *modern nursing's "lady with the lamp"*

In 1851, when Nightingale defied her family and began nursing, it was a job for fallen women. Nurses were, after all, expected to accommodate doctors' sexual needs. Certainly no lady should witness a hospital's immodest sights. But Nightingale, who feared that the inactivity imposed on women of her class was pulling her toward insanity, believed God called her to nursing. After minimal training she opened a clinic in 1853. When Nightingale's "Angels" nursed the wounded in the Crimean War, mortality rates plummeted. A legend when she returned home to Britain, Nightingale took to her bed with a heart ailment and nervous afflictions. Still, she continued to direct medical reform and ensured that nurses were properly trained. Eventually senility and nerves tempered her brusque personality. When she was awarded

the Royal Order of Merit in her bed in 1907, she murmured, "Too kind, too kind." **19,340**

121 B. F. SKINNER (1904-1990) *stimulating psychologist*

Skinner founded behaviorism, the theory that humans react primarily to external stimuli, not to ideas or subconscious longings. You aren't a pervert who lusts after Mom (or Dad), the Harvard professor assured us, repudiating Freud; you're a laboratory rat. But that's good, because we can build a better world through the "positive reinforcement" of desirable behavior. Skinner liked to tinker with machines that applied his principles, from his famous climate-controlled "mechanical baby tender" to a guided missile steered by pigeons. He also taught pigeons to play table tennis. Skinner had enormous influence on American psychologists in the 1950s and 1960s. Yet his writings are riddled with banalities, from his pronouncement that "better contraceptives will control populations only if people will use them" to his admonition to old people to eat well. Skinner abandoned his youthful dream of writing novels because "I had nothing to say." On coming to terms with our ultimate fate, he observed. "It is probably better not to think about death." **19,339**

122 JOSEPH LISTER (1827-1912) *surgeon who introduced antiseptics in medicine*

He didn't save the world from halitosis, but he discovered that antiseptics kill germs. Lister, a British surgeon, despaired at the forty-percent mortality rate for amputations and the almost-certain death of patients after abdominal surgery. He discovered how to kill off germs without destroying the surrounding tissue. His patients had always fared better because he was a stickler for cleanliness.

When he heard that carbolic acid aided sewage treatment, he fiddled with salves until he obtained near-miraculous results in curing and preventing infections. Because his methods gave a chance to cases once deemed hopeless, Lister was universally revered in his lifetime. It was only natural, when a pharmacist concocted a liquid antiseptic in 1879 for use during and after surgery, that the golden burning germ-killer be named Listerine. Its use for bad breath was still decades away. **19,321**

123 JAMES D. WATSON (b. 1928) *DNA detective*

Watson, the American geneticist and biophysicist, had some help identifying the molecular structure of deoxyribonucleic acid, or DNA, the molecule of heredity. This two-meter-long microscopic strand in each cell determines who we are. The 1953 discovery was one of the most significant since Mendel (104) founded the science of genetics a century earlier. It earned Watson the Nobel Prize in 1962, with Britain's Francis Crick and Maurice Wilkins. We put Watson a gene above his fellow researchers at Cambridge because it was his theory that DNA's essential components, four organic bases, had to be linked in pairs. Working together, Watson and Crick relied on Wilkins's X-ray defraction studies of DNA to produce their thesis that DNA is shaped like a double helix. Their painstaking research had breakthroughs and frustrations. "Science seldom proceeds in the straightforward logical manner imagined by outsiders," Watson later wrote. "Instead, its steps forward (and sometimes backward) are often very human events." **19,311**

124 THOMAS HUNT MORGAN (1866–1945) *fruitful geneticist*

Before you toss out that overripe cantaloupe, pause to acknowledge Morgan's genius. Those

annoying fruit flies swarming the melon helped Morgan describe how chromosomes contribute to heredity. Picking up where Mendel left off, Morgan began in 1907 to unravel how you inherited your grandmother's red hair. From his Columbia University "fly room," Morgan described the link between genes and chromosomes. Breeding experiments had always been hampered because of an animal's gestation period, but fruit flies solved that problem because they reproduced in twelve days. An added bonus was that thousands could be housed in one milk bottle. Morgan's experiments explained the mysteries of heredity, thus shifting the focus of biochemistry, giving new understanding to inherited disease, and putting genetics on its modern course. When his first child was born in 1906, Morgan said his son inherited his mother's character. "Apparently it dominates in the first hybrid," he observed. **19,299**

125 VASCO DA GAMA (c.1460–1524) *discoverer of the sea route from Europe to India*

The Portuguese were smart. While the delusional Columbus (2) was still insisting that America was some woodsy offshore island of Japan, da Gama was proving that the way to reach Asia was, yes, to go East, young man, but first go South. Da Gama's four-ship fleet rounded Africa's Cape of Good Hope and on May 20, 1498, landed in Calicut, India. It was the first all-sea trip from Western Europe to India, and it launched Portugal's 450-year empire in East Africa and Asia. Not until the Suez Canal was dug in 1869 was there a quicker all-sea route from Europe's Atlantic coast to Asia. Calicut welcomed da Gama, but jealous Arabian traders incited the local population, and he had to fight his way out. He returned in 1503, subdued the city, and skewered many of its citizens. **19,292**

126 SALADIN (SALAH AD-DIN YUSUF) (1138-1193) *Islamic liberator of Jerusalem*

The Crusaders didn't deserve an enemy as honorable as Saladin. The Christians waded in blood when they conquered Jerusalem in 1099. When Saladin recaptured the city eighty-eight years later, he spared his enemies and opened holy sites to pilgrims of all faiths, even Christians. For money, of course. Saladin started soldiering at fourteen and fought his way to the leadership of Syria and Egypt by defeating other Islamic factions. Then he turned on the Christians. He became the hero of 1,001 breathless romances, including some that stretched the truth to pair him with the love-starved queen of France, Eleanor of Aquitaine (420). Saladin was good, but not that good; he was ten years old when Eleanor visited Palestine. However, Saladin did know Eleanor's crusading son, Richard the Lion-Hearted: they made peace in 1192. **19,258**

127 DAVID RICARDO (1772-1823) *the reason they call economics the "dismal science"*

The son of a Dutch immigrant, Ricardo made a fortune on the London stock market before formulating some of the nineteenth century's most important contributions to economic thinking. Whether or not the pessimism of his friend Thomas Malthus (306), the population doomsayer, infected his thinking, Ricardo is best known for his notion that wages stabilize at subsistence levels. Thus, he reasoned, the only way for government to keep poverty in check is to limit the number of poor people—among other methods, by discouraging "early and improvident marriages." His thesis that the value of a product depends on the labor that goes into it influenced Marx (14). His theory of comparative advantage,

which states that free trade is the most efficient way of allocating global resources, was instrumental in breaking down trade barriers in Europe. And his theory of rent played a part in land-reform movements in both Europe and the United States. **19,252**

128 ERNEST RUTHERFORD (1871-1937) *atom smasher*

His is the stuff of science fiction. Rutherford discovered gamma rays and described alpha and beta particles and thorium X. He smashed an atom, demonstrated that it consisted of a central nucleus surrounded by electrons, and accomplished the first artificial transformation by changing one element into another. His research provided the cornerstone for the subsequent generation of physicists who put nuclear technology into warfare. A New Zealander who emigrated to England, Rutherford balked at geographic boundaries within science. At the dawn of the nuclear age, he envisioned governments pooling resources and working together. He corresponded with colleagues around the world and mentored fledgling scientists. When Jewish scientists fled Nazi Germany, he helped them find refuge. Yet another Nobel Prize winner, Lord Rutherford earned the ultimate honor in death—he was buried in Westminster Abbey. **19,228**

129 RAPHAEL SANZIO (1483-1520) *Renaissance wonder*

Just about every fourteen-year-old knows that Raphael was one of the four greatest Renaissance painters. And while we can attribute Raphael's latest renaissance to four pizza-eating Teenage Mutant Ninja Turtles, it underscores, rather than diminishes, the importance of his work. Trained by his artist father, Raphael was also influenced by Leonardo (9) and Michelangelo (13); if the

Renaissance had sponsored art contests, he would have finished third behind them. Like other Renaissance artists, he studied anatomy and perspective. Concentrating especially on portraiture, Raphael was obsessed with the Madonna. He painted her in dozens of ways—with fish, rose, veil, curtain, book, carnation, child; with angels and saints, including John the Baptist, Francis, Jerome, Elizabeth, and Catherine. With the popes as his patrons, it's not surprising that his best works have religious themes. Our favorite by far—the action-packed *St. George and the Dragon*. **19,189**

130 AUGUSTE COMTE (1798–1857) world's first sociologist

In fact, he coined the term. The French cogitator also concocted positivism, which stipulated three stages of human understanding of the world: the theological, or superstitious; the metaphysical, or abstract; and the positive, or objective and rational. He believed we should renounce the first two and pursue the third. While many of the ideas he expressed in his main work, *The Course of Positive Philosophy*, seem ludicrous today, they represent the first great effort to redefine the good society in the industrial age. Given to grand gestures, from abandoning his parents' Catholicism to marrying a prostitute, Comte considered himself a reformer more than a thinker. An idealist, he lectured workers free of charge and went to jail rather than join the National Guard. Which is not to say he succumbed to false modesty. Otherwise he could never have written of his science of sciences, or "religion of humanity," as he also called his philosophy: "It is time to complete the vast intellectual operation begun by Bacon, Descartes, and Galileo, by constructing the system of general ideas which must henceforth prevail among the human race." **19,175**

131 JOHANN WOLFGANG VON GOETHE (1749–1832) Olympian of letters

"I am like a snake," Goethe said. "I slough my skin and start afresh." A lifetime of metamorphoses took this colossus of German literature from the turbulence of early romanticism to the serenity of classicism. He wrote brilliantly of politics, science, philosophy, history, and art. But his fame rests largely on the poetic drama *Faust*, the product of sixty years of meditation and personal regeneration. It inspired novelist Thomas Mann (584) and composers Richard Wagner (165), Hector Berlioz (671) and Charles Gounod. A towering intellect, Goethe also surged with passion. He was forever in love, casting each object of his affection as his poetic muse. That pattern persisted to age eighty-two, when he dallied with a teenager. In his weakened state he contracted fatal pneumonia. Death, Goethe's final metamorphosis, overtook him as he sat in his armchair, murmuring of his love for a dark-haired girl. **19,162**

132 MAIMONIDES (1135–1204) rabbi of reason

From Moses to Einstein (17), Jews have survived by staying one step ahead of tyrants. In 1148, when the new Islamic ruler of Córdoba offered Jews the depressingly familiar "convert or die" option, Maimonides took the road to Morocco and Egypt where he found safety in the court of a tolerant sultan, Saladin (126). Maimonides's family was in the jewelry business. But when his brother David was lost at sea with a stock of gems, Maimonides devoted himself full time to his other trades: philosopher, rabbi, and physician. His commentaries on Jewish law set the agenda for future rabbis and his writings on Aristotelean reason influenced Thomas Aquinas's (8) scholasticism. Maimonides's wisdom still grips us. The worst form of charity is money given grudgingly

with strings attached, he wrote; "The highest step and the summit of charity's golden ladder" is to teach the poor a trade. **19,131**

133 **ANDREA PALLADIO** (1508-1580) *divine builder*

Ever wonder why the White House has columned porticoes or how those handsome curved windows gracing new homes got their name? The answer: the legacy of Palladio, the Venetian architect who drew inspiration from the Romans and whose buildings reflect his supremely rational and orderly approach to design. This Renaissance giant's influence has spanned four centuries and spread throughout Europe into the New World. With that portfolio, you'd think he was a worldly scholar. Not so. Palladio was only a bright brick-layer when a rich Venetian discovered him and tutored him in humanism. The rest is architectural history. Palladio won commission after commission, specializing in villas for the nouveaux riches and palaces for the firmly entrenched well-heeled. His treatise, *The Four Books of Architecture*, popularized classical decorative details and, some say, was the most influential architectural pattern book ever printed. **19,111**

134 **LECH WALESA** (b. 1943) *death knell for Communism*

The most influential political leader at the end of the twentieth century aspired only to the simple life of an electrician. Yet we traced the epicenter of the earthquake that crushed Communism back to his shipyard in Gdansk, Poland. There Walesa and members of Solidarity, the trade union, staged courageous strikes and peaceful opposition to the government's raising of meat prices. Walesa and other union rabble-rousers were jailed, but the government could not turn back the tide of change. One by one Eastern European nations

followed Poland's lead and turned away from stifling, restrictive governments. The Berlin Wall fell. Even the paterfamilias of Communism, the Soviet Union, abandoned it. But Solidarity was first. Walesa won the Nobel Peace Prize in 1983, and in 1990 he was chosen president of Poland in free elections. **19,102**

135 **ELI WHITNEY** (1765-1825) *inventor of interchangeable parts*

No, Whitney didn't make our list for his 1793 invention of the cotton gin (which is, by the way, short for "engine"). Whitney, a Massachusetts native who was trained as a lawyer, lost so much money in a prolonged fight for the patent rights to his mechanized cotton-picking machine that he eventually gave up and started making weapons. Here's where Whitney's lasting influence comes in. He standardized the manufacture of parts at his rifle factory and started the country on the road to industrialization. He established a rudimentary assembly line in which workers fit the same standard part into a partially constructed musket over and over again. He had the right idea, but he was ahead of his time. It took him eight years to finish a two-year government contract for ten thousand guns. **19,077**

136 **MAX PLANCK** (1858-1947) *originator of the quantum theory, "the greatest mystery we've got," in the words of physicist John Archibald Wheeler*

Though less acclaimed than Einstein (17), Planck sits at the right hand of the master. Their speculations form the basis of modern physics. "Planck's constant," putting a finite value on the dimensions of the subatomic world, means time and space have units that can't be made smaller. Thank heavens; otherwise, we wouldn't be able

to move. Like most of the millennium's great thinkers, Planck was a religious man, and he must have called often upon his faith. Both his daughters died in childbirth, his first son was killed in World War I, and his second son was tortured to death by the Nazis. By historical coincidence, the quantum theory, which gave birth to the uncertainty principle that places a limit on the accuracy of the scientific method, was formulated in 1900—the dawn of the century of live-and-let-live moral relativism. **19,063**

137 JOSEPH PRIESTLEY (1733–1804) *experimental chemist*

Priestley achieved fame and infamy for his pioneering efforts in education and his support of religious and civil liberties. But this Protestant preacher contributed to the launching of modern chemistry by discovering ten new "airs," or gases. His biggest breakthrough: observing that red mercuric oxide, when heated, gave off a colorless gas he called "dephlogisticated air." Lavoisier (67) repeated Priestley's experiment and christened the gas "oxygen." Priestley earned worldwide prestige as a scholar, but his ardent support of French revolutionaries made him hated in his native England. After French king Louis XVI was executed, mobs destroyed Priestley's Birmingham home and laboratory. He fled to the safety of the United States and there communed with American thinkers, including Jefferson (64) and John Adams (214). Priestley's intellect was so impressive—and the void he left behind so great even years after his death—that Adams once exclaimed to Jefferson, "Oh, that Priestley could live again!" **19,038**

138 CATHERINE THE GREAT (1729–1796) *empress of Russia*

Her importance lies in her expansion of the Russian empire, but she is interesting for her con-

tradictory personality. As a young bride immersed in the Enlightenment, the future despot despised despotism. A romantic, she ordered her dissipated husband's assassination. Capable of cruelty, she risked smallpox inoculation to set an example for her subjects. Vain, she shunned high-heeled shoes because they hurt her feet. Contempruous of others' weaknesses, she was addicted to coffee and snuff. Fancying herself a thinker, she hoped Montesquieu (106), "now in heaven," would forgive her plagiarism. The story about the horse is untrue, though she was sexually active, starting with the Adonis-like Stanislaus Poniatowsky ("Stany" to her highness), who slipped into her boudoir disguised as a footman and was made king of Poland for his attentions, and ending with boy-toys in her dotage. So what? She was great, as only Peter the Great (27) had been great before her in Russian history, and Lenin (41) after. **19,011**

139 SUSAN B. ANTHONY (1820–1906) *suffrage leader and cofounder of the U.S. women's rights movement*

Irony, isn't it, that when they finally decided to put a famous woman's image on a piece of American money, they designed a coin no one wanted to use. Just before Anthony died at age eighty-six, she reminded suffragists, "Failure is impossible." Sad commentary that the vote was still fourteen years away and true equal rights elude women still. Anthony was vilified in her lifetime because her philosophy of equality, which she preached publicly and vociferously, was deemed unwomanly. Mocked for her failure to marry, described in print as "personally repulsive," and arrested for attempting to vote, Anthony argued for the vote and women's equality to three generations of American women. Like the embarrassing aunt who becomes "eccentric" and

interesting with age, Anthony stayed around long enough to witness her own rehabilitation. **19,001**

140 **CARL BENZ** (1844-1929) *manufacturer of the first salable car*

His name symbolizes the ultimate driving luxury, but when Benz successfully took to the manure-laden streets of Munich in June 1886, his automobile was a no-frills, glorified tricycle. Indeed, it would be an overstatement to assert that Benz "invented" the automobile. He was one of dozens of inventor/tinkerer-types around the globe who were racing to build a horseless carriage. Yet he managed to develop his version well enough to sell the first one in 1887. Two years later fifty workers were employed at the Benz factory. By 1890 he was turning out four-wheeled vehicles. Benz also invented electric ignition and water cooling in his cars. True luxury cars with big price tags didn't come until after the Benz company merged with Gottlieb Daimler's (275) Mercedes in 1926. **18,967**

141 **ANNA ELEANOR ROOSEVELT** (1884-1962) *first among first ladies*

If there hadn't been an Eleanor, there wouldn't have been a Franklin (37). She refused to let her polio-stricken husband sink into self-pity, and her indefatigable campaigning in his bid for New York's governorship helped propel him into the White House in 1933. Through it all she was her wheeler-dealer husband's social conscience, championing the causes of women and the poor in her daily newspaper column. She was a voice of civil rights in an era before civil rights. Though theirs was a marriage of convenience by then, she helped mold FDR's New Deal and chewed his ear on her pet issues. When women were barred from presidential news conferences, Roosevelt held her own press meetings and allowed only women

reporters to cover them. An indefatigable worker, she said she believed, "It is not fair to ask of others what you are not willing to do yourself." Despite criticism that her activism went beyond the proper role for women, Roosevelt set the standard by which all subsequent first ladies have been measured. **18,933**

142 **ROBERT BOYLE** (1627-1691) *catalyst of the chemical revolution*

Boyle ranks below Bacon (84), Galileo (4), and Newton (6) in the pantheon of modern science, but he was also a philosopher, linguist, and author of sermons "for proving the Christian Religion against notorious Infidels." He viewed the universe as a giant clock started by God and run on His immutable laws. The fourteenth son of the earl of Cork, Boyle replaced the Aristotelian notion of four basic elements of earth, air, fire, and water with a concept of primary particles interacting to form "corpuscles"—a precursor of modern chemical theory. He also conducted pioneering laboratory experiments, formulated Boyle's Law on the relationship between gas volume and pressure, created a system of chemical classification, and perfected the air pump. Discovering so much, he lamented how little he knew in his *Essay of Men's Great Ignorance of the Uses of Natural Things*. **18,886**

143 **GEORGE STEPHENSON** (1781-1848) *the engineer who could*

Stephenson was a semiliterate coal yard maintenance man with a North England accent thicker than a vein of anthracite. His eloquence was in his hands. He was a whiz at improving and designing the steam-driven machines coming into vogue in the early nineteenth century, and in 1825 he built the twenty-five-mile Stockton and Burlington Railway for a mine owner who

needed to transport coal to port. Copying existing tramroads, Stephenson set the iron rails 56.5 inches apart, and that's still the standard railroad gauge in Britain and the United States. Some engineers designed engines; others built the tracks. Stephenson did both and made the whole power-packed package an industrial success, forever changing the way we travel. Even his genes were mighty. In 1830 his son Robert built "The Rocket," the best engine yet, giving the golden age of rail another burst of steam. **18,853**

144 **BLAISE PASCAL** (1623–1662)
*French scientist and
born-again Christian*

A mathematical prodigy whose sister said he figured out Euclid's proofs at twelve using a lump of coal on his playroom floor, Pascal founded the modern theory of probability and made important discoveries in calculus. In physics he formulated "Pascal's principle" governing hydraulics. He built the first calculating machine and helped set up the world's first regular city transport system in Paris. He was also the first writer of modern French prose. In 1654 he had a profound religious experience—his "night of fire"—and thereafter devoted his life to God. His *Pensées* posit faith as the key to understanding the universe and urge readers to "wager" God exists. His sayings rank as some of history's most memorable, including: "If Cleopatra's nose had been shorter, the face of the real world would have been changed," and "The heart has its reasons which reason does not understand." **18,821**

145 **DAVID WARK GRIFFITH** (1875–1948)
the first major film director

D. W. Griffith transformed movies into art. When his silent film *The Birth of a Nation* premiered in 1915, *The New York Times* noted that the "melodra-

matic and inflammatory" film marked the "advent of the two dollar movie." It was melodramatic because of its sympathetic treatment of two families—one from the North and one from the South—and inflammatory because of its unsympathetic, cruel portrayal of blacks. Content aside, Griffith's uncanny cinematic insight, camera techniques, film editing, and authentic sets defined the standard for future Hollywood filmmaking. Griffith's colossal epic gave the illusion of reality on battlefields and on night rides of the Ku Klux Klan. Its then unheard-of length—two and a quarter hours—coupled with a huge cast, sweeping camera work, and politically charged subject matter left audiences breathless. An advocate of using film to teach difficult concepts, Griffith called it "history by lightning!" **18,803**

146 **CARL JUNG** (1875–1961)
Freud's star pupil

—until he took a closer look at psychoanalysis and decided it didn't work for him. When Freud (15) urged him to hold fast to sexual theory, Jung said, the master spoke like a father saying, "Promise me, son, you will go to church every Sunday." In a classic Oedipal rebellion, the pipe-smoking Swiss sage founded his own therapeutic school, analytic psychology, based on the mystical notion that primeval archetypes lurk in the human mind as a "collective unconscious" that drives our behavior. As he put it: "Individual consciousness is only the flower and the fruit of a season, sprung from the perennial rhizome beneath the earth." Rivaling Freud's interpretation of human personality, Jung's philosophy found some surprising expressions, from his construction of a strange but beautiful house as a representation "of my innermost thoughts" to his fascination with UFO sightings as twentieth-century projections of ancient myth. **18,769**

147 **GEORGE BOOLE** (1815-1864) *mathematician whose logic lurks behind computer technology*

Anyone who has searched a computer database is versed in Boolean logic. Use *and* to link two terms, and you narrow the search; use *or* to link the same terms, and you broaden the search. Boole created a binary system of symbolic logic based on two numbers—0 and 1—that today we call Boolean algebra. Not only do we trace the binary system used in computer technology to Boole, but we credit him with the technology used in telephone switching. Yet another scientist who rose above humble beginnings, Boole taught himself Latin, French, Greek, German, and Italian. He worked his way up to become a mathematics professor at Queen's College in Cork. Then, in his 1854 masterpiece, *An Investigation of the Laws of Thought*, he logically laid out his system in black and white (or is it, black or white?). **18,765**

148 **AKBAR** (1542-1605) *greatest of India's Mughal emperors*

Akbar expanded his dominion throughout the subcontinent, adding Afghanistan, Baluchistan, and northern India to create the most powerful empire of his day. A Muslim, he took Hindu wives and made common cause with Hindu princes (though he also lopped off the head of a Hindu prisoner at age fourteen to prove his manhood), and he invited Christian missionaries to his realm. An enlightened ruler, he launched a renaissance of Indian painting, promoting a school of realism marked by bold colors and Western perspective. Akbar had other passions, too. Though illiterate, he was so captivated by philosophical discourse that he had to "forcibly restrain myself from listening to it." His craving for mango fruit was so potent, he planted an orchard of a hundred thousand mango trees, and

his love of polo so great, he had polo balls painted with phosphorus so he could play at night. **18,710**

149 **PABLO PICASSO** (1881-1973) *modern art's colossus*

During Picasso's ninety-two years on Earth, this incredibly versatile artist of almost mythical energy produced more than twenty thousand works, including paintings, sculptures, drawings, illustrations, and even pottery. He influenced the cubist movement and abstraction and introduced collage. He also consumed five mistresses and two wives; his art reflected the joy of each new union and the bitterness of each breakup. He had his Blue Period and his Rose Period, but his most famous painting is largely black and white. *Guernica*, an eleven-by-twenty-five-foot canvas that interprets the German bombing of the Basque town of Guernica during the Spanish Civil War, explodes with terror and destruction. "One does not paint in order to decorate apartments," Picasso said. "Painting is an instrument of offensive and defensive war against the enemy." **18,666**

150 **HERNÁN CORTÉS** (1485-1547) *New World warrior*

Cortés's conquest of Mexico in 1521 ranks among the most pivotal military feats ever; his forces laid siege to the Aztec capital, crippling Montezuma's mighty empire. Cortés's military campaign was bolstered by a turncoat native princess who became his interpreter/mistress and by 200,000 Indians who wanted their Aztec tormentors crushed. The victory ushered in three centuries of Spanish domination in South America. It turned out that Cortés had less to fear from Aztec spears than from infighting. Diego Vasquez, Spanish governor of Cuba, was jealous of Cortés's success and undermined his prestige in Spain. Cortés returned home in 1540 to find he meant nothing

to Charles V (61) and his court. One account has it the king was entering his coach when he spotted a familiar figure in the crowd. Charles asked who the fellow was, only to have Cortés bellow back, “It’s the one who gave you more kingdoms than you used to have towns.” **18,619**

151 THOMAS HOBBS (1588–1679) *British philosopher and early advocate of testosterone control*

Hobbes’s bleak materialism was attacked in his day and ours, but his theory of a social contract between rulers and subjects had an enormous influence on the West’s political evolution. Men, Hobbes maintained, are driven by a “restless desire of power” and tend to go around killing one another. Thus, he famously declared, in their natural state they live lives that are “nasty, brutish, and short.” In civilized societies, however, they surrender their rights to a sovereign in return for his protection. Forget Hobbes’s royalism; his assumption that the state derives its legitimacy from the people, not God, was a breakthrough in political thinking, leading eventually to democracy. Hobbes couldn’t have been more unlike his imaginary ignoble savage. He tutored noblemen’s sons, lived high off the hog, translated Homer in his eighties, and took what he called his “great leap in the dark”—death—at ninety-one. **18,543**

152 FAKR AD-DIN AR-RAZI (1149–1209) *Muslim theologian*

Ar-Razi loved disputation above all else (even food, he said) and traveled about the medieval lands of modern-day Iran, Turkistan, and Afghanistan debating local scholars. He also expounded—too lovingly, some religious leaders griped—on heretical doctrines before skewering them with his ripostes. Merciless toward enemies and rivals, he orchestrated his brother’s death in a

shah’s dungeon. Enemies sometimes struck back, like the fanatic who opposed rational analysis of Islam. “Here is my proof,” he declared, brandishing a knife at Ar-Razi. But Ar-Razi always maintained he was doing it for the good of the faith, and in fact by forcing the sects of his troubled age to reexamine their creeds, he helped unify Islam. He wrote more than a hundred books, and his commentaries on the Koran, Islam’s holy text, are regarded as masterpieces. **18,512**

153 HENRY THE NAVIGATOR (1394–1460) *founder of the Age of Exploration*

He seldom left home and died thirty-two years before Columbus (2) set sail, but Portugal’s Prince Henry launched the age of exploration by ordering seamen south to Africa and nearby islands. Today it seems like a jaunt, but at the time the Henry-inspired expedition that rounded the Guinea coast was a giant leap. Contemporaries called Henry’s pastime a waste of money. Nobody complained, though, when his voyagers brought home slaves and gold from Africa. In 1498, after predecessors had inched their way south, Portuguese navigator Vasco da Gama (125) found a new route to India around Africa’s Cape of Good Hope. That put Portugal first in the race to the wealth of the East and control of the Spice Islands. Henry’s hobby had paid off. **18,492**

154 SARAH BERNHARDT (1844–1923) *the millennium’s greatest performer*

Known as “the Divine Sarah,” this French thespian was a legend in her lifetime, thrilling audiences in Europe, the United States, Australia, South America and Canada in roles created by Victor Hugo (163), Alexandre Dumas (874), and Jean Racine (389). Hugo lauded her “golden voice.” But offstage Bernhardt was temperamental and arrogant. She once said, “To be worthy of

the name, an actor must be capable of a continuous dissection of his personality." Hers was fundamentally flaky; some say Bernhardt slept in a coffin. For sheer color, we rate her over rival Eleanora Duse, the Italian actress of quiet strength and subtlety. Bernhardt's name is synonymous with melodrama, on and off the stage. She also scores for her gutsy final curtain. Her right leg had to be amputated following an injury, but Bernhardt insisted on visiting troops during World War I. So she clambered onto a litter chair and was carried to the front. **18,398**

155 **LE CORBUSIER** (1887-1965) *sculptor of buildings*

Le Corbusier was the pseudonym of Charles-Édouard Jeanneret, a Swiss painter, writer, architect, and city planner. Largely self-taught, he was the first architect to champion the use of reinforced concrete, which he molded like plastic to give his buildings form. The man who once proclaimed, "A house is a machine for living in," created functional structures spiked with bold expression. His quintessential design: a box with strips of horizontal windows, open living spaces, and roof gardens. The United Nations Secretariat building in New York is mostly his plan. He loved to shock, which cost him points in conservative quarters. That's why his innovative design for the League of Nations building in Geneva—with its wall of heating and insulating glass—lost the 1927 competition when judges disqualified it on a technicality. While the setback embittered Le Corbusier, his entry only won him greater renown among young architects. **18,387**

156 **LOUIS-JACQUES-MANDÉ DAGUERRE** (1789-1851) *inventor of practical photography*

When Daguerre's pictures were unveiled at a lecture in 1839, Parisians combed opticians' shops

and pharmacies for the equipment to duplicate his process. The "daguerreotype" was so coveted that, in a grand philanthropic gesture, the French government purchased the rights and gave the invention to the world—free of charge. The technique was not without problems: the camera was unwieldy and required subjects to sit perfectly still with their heads in clamps for thirty minutes to fix the image; the process yielded only one "positive" plate; and pictures had to be made outdoors on sunny days. Its aficionados were undeterred. By 1850 there were ten thousand daguerreotypists in the United States alone. This process remained in vogue for about twenty-five years until the development of a quicker one using negatives that could be copied onto paper. But for his vision, we dub Daguerre the "father of photography." **18,345**

157 **GAVRILO PRINCIP** (1895-1918) *assassin who ignited World War I*

On June 28, 1914, Princip and six other Serbian-trained Bosnian liberationists slipped into Sarajevo to kill the heir to the Austrian throne, Archduke Francis Ferdinand. One of Princip's bomb-throwing pals missed Francis, but when the archduke and his wife Sophie drove to the hospital to visit injured aides, the chauffeur took the wrong street. Purely by coincidence, Princip was walking by; he fired into the car and killed the royal couple. Austria's wishy-washy Emperor Francis Joseph (266) almost let the incident pass. But Europe was a powder keg, and Princip had supplied the spark. German warmongers goaded Austria into retaliating against Serbia, and all the nations chose sides. Before World War I ended, ten million soldiers were dead. Princip, too. The law forbade execution of teenagers, but tuberculosis claimed him in 1918. **18,314**

158 VINCENT VAN GOGH (1853–1890) tormented artist of haunting expressionistic paintings

In his lifetime Van Gogh sold only one painting, but in 1990 the \$82.5 million paid for his portrait of his physician set a record for the world's most expensive painting. Van Gogh's torment began at birth—he was named after a dead brother and spent his life wondering if he was a substitute for the dead baby. After work as an art dealer and a minister, Van Gogh began painting. Through hundreds of letters written to his brother Theo, we see Van Gogh drift into madness. In a psychotic frenzy he cut off part of his ear and sent it to a prostitute. During his year in a mental institution in southern France, he produced some of his most memorable paintings. Unable to still the madness, he shot himself and died in his brother's arms. Our favorite Van Goghs: *Starry Night*, of course, and *The Potato Eaters*. **18,313**

159 MASACCIO (1401–1428) humanist master

Masaccio's life was just a brushstroke on eternity's canvas, yet he changed painting forever. He established a first in painting: the use of light coming from a single source to emphasize natural form. He was born Tommaso di Giovanni di Simone Guidi. Good-hearted but absentminded and sloppy in dress, he was nicknamed Masaccio, "Big Clumsy Thomas." Like contemporaries Brunelleschi (85) and Donatello (319), Masaccio brought humanism into his art, dispensing with medievalism's God-centered view to focus on man and the world. His figures were warm and solid. He mastered the technique of perspective in *The Trinity*, but his legacy is greater: the celebrated *Life of Saint Peter*—awesome frescoes in the Brancacci Chapel in Florence. His new style of realism made him a founder of modern

painting and a temple at which Da Vinci (9), Michelangelo (13), Raphael (129), and countless others worshiped. **18,278**

160 FRANK LLOYD WRIGHT (1867–1959) innovative architect

Junior architect Wright got the residential projects while senior colleagues snagged commercial plans. Never mind. Wright's prairie houses soon formed the basis of twentieth-century residential design. Influenced by the Mayans, Native Americans, and European cubists, Wright's houses of stone, brick, and copper seemed to grow out of their grassy hills or rocky slopes. Architect Eero Saarinen described Wright's work as "all one organism, all one thing." Wright first won international recognition, then connected with Americans. His most famous work: the Solomon R. Guggenheim Museum in New York, a six-story helix that opened in 1959. Wright's wit, like the corners of some of his buildings, had sharp edges. Novelist Rex Stout once invited him to the fourteen-room house Stout had built on a Connecticut hillside. Wright took a long look, then proclaimed it "an excellent spot. Someone should build a house here." **18,198**

161 IBN SĪNĀ (980–1037) all-purpose medieval genius

Ibn Sīnā, or Avicenna as he was called in the Christian world, mastered the Koran, Greek philosophy, and the arts of legal disputation and medicine when he was a mere teenager. Then he started writing. One of his achievements was the five-volume *Canon of Medicine*. Though most of it is now considered quackery, it was the leading authority on symptoms, herbs, drugs, and crude surgery until the seventeenth century. His many works synthesizing divine revelation and Greek logic and metaphysics were the true beginning of

medieval philosophy and had an impact on the thinking of Thomas Aquinas (8), Albertus Magnus (726), and Roger Bacon (412). Ibn Sīnā was born in what is now Afghanistan, and he served various rulers in Persia. But his true service was to civilization as a thinker who helped drag the world out of the intellectual Dark Ages. **18,193**

162 OLIVER CROMWELL (1599-1658) leader of the English Parliament's revolt

Cromwell hated absolutist rulers and bishops, and he rid England of both. He was a radical Puritan member of the House of Commons whose knack for soldiering propelled him from battalion commander to victorious leader in the civil war against the autocratic, crypto-Catholic king Charles I. "I tell you we will cut off his head with the crown on it," Cromwell replied roughly when a royalist questioned Parliament's right to try the king for treason. Charles was beheaded in 1649, and Cromwell ruled as England's dictator for the next nine years. After Cromwell's death, an England weary of gloomy Puritanism invited Charles's son to rule, and Charles II got grisly revenge. Cromwell's disinterred head was put on a pole atop Westminster Hall. But it was too late to stop what Cromwell had wrought. After him, no English king dared to claim absolute power. **18,182**

163 VICTOR HUGO (1802-1885) the great romantic

Hugo's overwhelming personality, with its infinite contradictions, rivaled his monumental talent. Attentive husband, doting father, and lusty suitor, he kept wife, mistress, and countless conquests on the side. As a young poet, he curried favor from the monarchy, then evolved into an impassioned republican. To author Jean Cocteau, "Victor Hugo was a madman who believed himself to be

Victor Hugo." Whatever his true persona, Hugo the writer sent classicism reeling in 1830. He demolished literary conventions by introducing a new sound and beat of verses in his romantic drama, *Hernani*. But it is the sweep and drama of Hugo's poetry, *The Contemplations* and *The Leaves of Autumn*, and his novels, *The Hunchback of Notre Dame* and *Les Misérables*, that place him at the forefront of French literature. Writer Jules Renard observed: "Only Victor Hugo has spoken; other men merely stammer." Even the act of dying couldn't diminish Hugo's poetic powers. "Here is the battleground of day and night," he whispered, before darkness enveloped him. **18,105**

164 AVERROËS (IBN RUSHD) (1126-1198) Christianity's favorite Muslim

In the late Middle Ages Averroës, as the Latins called Ibn Rushd, had a huge following in the Christian West. His analysis of the relationship between reason and faith in his commentaries on Aristotle had a profound effect on European theologians. The commentaries were helpful to Thomas Aquinas (8), though Aquinas denounced Averroës's Christian followers for being too strong on reason, too weak on faith. Some of Ibn Rushd's own Islamic contemporaries beat Aquinas to the Averroës-bashing game. In 1195 he was accused of spreading falsities, particularly ideas that subverted the notion that God created the world. His books were burned, and he was banished briefly from his home in Córdoba. Ibn Rushd was also a judge, diplomat, scientist, and author of a medical encyclopedia, which makes him a real renaissance man two hundred years before the Renaissance. **18,101**

165 RICHARD WAGNER (1813-1883) the man who made the fat lady sing

Wagner stretches the limits of our ability to love the art of artists we hate. He was an egomaniac

who stole his friend's wife, fought with former admirers like Nietzsche (215), and made anti-Semitism his ideological leitmotif. Impressionist master Pierre-Auguste Renoir (384) came to sketch Wagner's head and in return heard a tirade against German Jews. But oh, those heavenly notes. Wagner rescued the music of opera from frivolous French and Italian melody-makers and fused it with drama, motion, and spectacle. Above all, as musicologist Donald Grout wrote, Wagner's music carried its audiences to a state of mystical and sensuous ecstasy, the goal of all romantic art. Conductor Bruno Walter—a Jew, by the way—wrote that on first hearing *Tristan and Isolde*, “never had my heart been consumed by such yearning and sublime bliss.” Our favorite Wagner: *Die Walküre*, all four and a half hours. **18,059**

166 HUGO GROTIUS (1583–1645) originator of international law

He wrote Latin verse at age nine, finished law school at fifteen, was Holland's official historian at twenty, and was sentenced to life imprisonment at thirty-six, for preaching toleration in a Calvinist country. Not to worry. Grotius's wife fooled his Keystone Cop guards into carrying him to freedom in a sealed box they thought was full of weighty books. Grotius fled to France, where Louis XIII offered him a hefty pension and the freedom to write *On the Law of War and Peace*, the millennium's most important treatise on international relations. In it Grotius wrote that wars for defense and recovery of property were legitimate, but that fighting should be prevented by negotiations and battles should be fought according to rules he laid out, such as no killing of civilians. Civilized countries pay lip service to his laws today. By the way, big-hearted Louis was all talk. He never paid the pension. **18,038**

167 HENRIK IBSEN (1828–1906) creator of the modern theater

Ibsen was to the stage what Darwin (7) was to biology and Freud (15) to sex. “Everything that isn't a copy of him is a reaction to him,” said scholar Eric Bentley. Subsequent giants acknowledged their debt; George Bernard Shaw wrote an ode to him; playwright Eugene O'Neill (426) called him “my inspiration”; filmmaker Ingmar Bergman (958) said, “He has followed me all my life.” Scholars divide this Scandinavian dramatist's works into three phases—poetic drama, social realism, and symbolism—but no matter; never before had any playwright probed so deeply into the human psyche. His exposure of human foibles, in *A Doll's House*, for example, offended many. One critic denounced his play *Ghosts* about syphilis as “a loathsome sore.” True, his rival August Strindberg dismissed him as a “Norwegian bluestocking,” but Ibsen retorted by placing a picture of Strindberg in his study and declaring, “He shall hang there and watch as I write.” **17,923**

168 JANE AUSTEN (1775–1817) homespun trend-setter of English literature

Austen was the first to weave a story from domestic circumstances, and no author has ever surpassed her uncanny mastery of the format. Unlike great classics that are praised but never read, her small stack of novels is notably readable. Indeed, Austen's stock has increased as each generation of readers comes to fancy her simple domestic plots. Her anonymously published novels, including *Sense and Sensibility*, *Emma*, and *Pride and Prejudice*, sold well during her lifetime although she initially had trouble finding a publisher. Austen poked fun at the fickleness of inheritance rights, scrutinized the British class system, and criticized the idleness of women.

Her critics snidely suggest that she wrote and rewrote one book—the story of an impoverished, gentrified family's attempt to find suitable husbands for their daughters. Austen herself never married, and she lived in obscurity with her sisters until her death at age forty-two. **17,921**

169 ALLEN DU MONT (1901–1965)
inventor of the cathode-ray tube,
a fancy name for your video screen

Allen who? Considering that his invention anchors so many modern conveniences, it's a wonder his name fails to convey the wizardry of a Whitney or a Westinghouse. Revered and honored by television technicians during his lifetime, Du Mont is virtually unknown today. Yet he made the first commercially viable CRT, a technology that unleashed the possibilities in dozens of other areas. He used the patents of researcher Charles Jenkins to produce the first picture/sound broadcast in 1931. Within six years he was manufacturing commercial television receivers based on the thirty patents he held. The cathode-ray tube dictated the design of personal computers, word processors, oscilloscopes, automatic teller machines, and radar tracking screens. Be it Milton Berle, a Boeing 747 on takeoff, or your thirty-five-dollar bank balance, cathode-ray tubes produce the images. **17,867**

170 GAMAL ABDEL NASSER (1918–1970)
Egyptian leader and pan-Arab idol

As a child, he shouted, "God Almighty, may a calamity overtake the English," every time he saw a plane fly overhead. Yet on the night he deposed King Farouk in 1952, he spoke English to coconspirators because "Arabic is hardly a suitable language in which to express the need for calm." In power until his death, Nasser nationalized the Suez Canal, briefly united Egypt with Syria, oversaw the construction of the Aswan Dam, introduced eco-

nomic and social reforms, created a police state, fought two losing wars with Israel, and joined with Nehru (222) of India and Tito of Yugoslavia to preach nonalignment with the superpowers. While he never realized his pipe dream of ruling over the world's 420 million Muslims, Nasser inspired hysterical adulation at home. Little wonder: He was the first home-grown ruler of an independent Egypt since the last pharaoh fell. **17,855**

171 JAMES JOYCE (1882–1941)
the *Ulysses* of modern literature

His *Ulysses*, an account, modeled on Homer's epic, of one day in the lives of a Dublin salesman, his wife, and a teacher, is the most influential novel of the twentieth century. In it the Irish writer displays amazing wordplay, powerful imagery, and thematic force, and develops his innovative stream-of-consciousness "interior monologue." Flip through *Ulysses* and read gems like: "He kissed the plump mellow yellow smellow melons of her rump, on each plump melonous hemisphere, in the mellow yellow furrow, with obscure prolonged provocative melon-smellious osculation." Sounds sorta pornographic to us, but an American judge lifted a ban on it in 1933, saying "the words criticized as dirty are old Saxon words, known to almost all men." Joyce warmed up to his style in *Portrait of the Artist as a Young Man* and took it to its impenetrable extreme in *Finnegans Wake*. George Bernard Shaw praised *Ulysses* but declined a request to purchase it, saying, "If you imagine any Irishman would pay 150 francs for a book, you know little my countrymen." **17,809**

172 PETER ABELARD (1079–1142)
brilliant bad boy of
medieval philosophers

Abelard brought logic and skepticism to the forefront of scholasticism, the philosophy developed

by medieval thinkers relying on Aristotle's teachings, early Christian writings, and church dogma. Abelard was a celebrated philosophy teacher in Paris and founder of that city's university when he seduced a young student, Héloïse. The couple secretly married but her uncle had Abelard castrated by thugs. In shame, he joined the priesthood and pressured Héloïse to become a nun. (Their love story has inspired poets ever since.) As a French Benedictine, the ever-critical Abelard argued that "the master-key to knowledge is to keep asking questions," and he applied it to matters of faith. Church leaders twice condemned him as a heretic, yet no matter whom he angered—and the monks in one abbey tried to kill him—his greatest punishment was house arrest. **17,803**

173 MEHMED II THE CONQUEROR (1432–1481) founder of the Ottoman Empire

With his capture of Constantinople in 1453, the mythical turning point between the medieval and modern ages, Mehmed II destroyed the last remnants of the Roman Empire and broke Christianity's tenuous hold on southeastern Europe. The son of Sultan Murad II and a Christian slave girl, Mehmed could be cold-blooded—he ordered a high-ranking official and his two teenage sons decapitated and the heads delivered to his banquet table after the minister refused to deliver one of the boys to him for sexual pleasure—but those were cruel times. He began his reign by talking peace, but as historian Edward Gibbon (654) said, "war was in his heart." After he conquered Constantinople (and turned the great church of Hagia Sophia into a mosque), Christendom quailed in fear of a Muslim onslaught. It never came; his subsequent military campaigns were mostly failures. **17,764**

174 JOSEPH-MARIE JACQUARD (1752–1834) *machinist who loomed large in the Industrial Revolution*

Four thousand years after the loom was invented in Egypt, weaving cloth in patterns was still a job for busy hands. Lots of them. Inventors tried to make a machine to do the job faster, and in 1728 Jacques Vaucanson built a mechanical loom. Unfortunately it was an unwieldy monstrosity. Then came Jacquard, a weaver-turned-tinker. In 1804 he found Vaucanson's loom in a museum and added a system of movable perforated cards to regulate the cloth patterns. Voilà! Jacquard's solo-operator looms in factories replaced hundreds of home-based weavers, making it an engine for the social changes accompanying the Industrial Revolution. Displaced Lyonnais silk workers threw Jacquard's machines into the Rhône River, but not fast enough. By 1812 there were eleven thousand of the looms in France alone, and Jacquard was rich. **17,745**

175 JEAN-BAPTISTE POQUELIN MOLIERE (1622–1673) comic genius

Poquelin was supposed to become an upholsterer like his father. Or a lawyer, as his uncle wished. Instead he chose the scandalous life of the stage, took the name Molière, and wrote, produced, and acted in scores of his own farces and comedies that eventually earned him acclaim as the greatest of all French playwrights. He created a style of comedy that juxtaposed the normal against the abnormal. A master of style and language, his shuck was quirky human nature. In *Tartuffe* Molière ridicules the religious hypocrite; in *The Imaginary Invalid*, a hypochondriac who fears death and doctors; and in his greatest comedy, *The Misanthrope*, the antisocial man. A critic once accused Molière of borrowing plots and incidents from ancient and modern plays. "I

claim my property wherever I happen to find it," Molière shot back. Ah, but whatever flowed from his pen became entirely his. **17,688**

176 **CARAVAGGIO** (1573-1610) *painter who followed no school but his heart*

Classical and religious themes. Dark backgrounds. Illumination directly on subjects. Skin so lifelike, a seventeenth-century critic mused that the color must have been made from ground flesh. These are elements of the paintings of Michelangelo Merisi da Caravaggio, a naturalist so unbound to his predecessors, he makes us think of the canvases Édouard Manet (301) painted 250 years later. Rembrandt (46) borrowed his techniques. Caravaggio did not emulate the saints he depicted. He scandalized Rome by using a drowned prostitute fished from the Tiber as the model for *Death of the Virgin*. He fled from the city for killing a man over a tennis wager, found favor in Malta, but had to run again when a vengeful enemy hired thugs to settle a score with the painter. They finally caught Caravaggio in Naples and disfigured his face with knives. **17,675**

177 **HENRY IV** (1050-1106) *loser*

Henry was the Holy Roman emperor whose effort to gain ascendancy over his traditional coequal in church affairs ended in spectacular failure. The idea of church-government separation didn't exist in the Middle Ages. Popes controlled territory in Italy, and sovereigns of the Holy Roman Empire—much of what is now Germany and Italy—shared religious power. When Henry asserted his rights in Italy, Pope Gregory VII (378) fought back, and Henry was forced to humble himself before the pope in the snow in the Italian town of Canossa in 1077. Henry's kowtowing didn't last

long; soon the pope and emperor warred again, until Henry was deposed by his own son. Henry's defeat provided the impetus for the papacy's control over the Catholic Church's destiny. **17,673**

178 **ROBERT GODDARD** (1882-1945) *the original rocket scientist*

On October 19, 1899, Goddard climbed into a cherry tree and, influenced by the science fiction novels he voraciously consumed, dreamed about building a device that could travel to Mars. He dubbed the date his "anniversary" and fondly visited the tree whenever he was back home in Worcester, Massachusetts. Although he had previously struggled in math and science, his new-found inspiration propelled him to success. He began experimenting with rocketry during graduate school and, by 1914, developed a rocket fueled by solids. When World War I intervened, Goddard worked on weaponry for the U.S. Army. Although the war ended before his bazookalike weapon was put to use, it saw action during World War II. While his liquid-fuel rocket reached a height of only nine thousand feet, Goddard's work was the launching pad for future space exploration. **17,665**

179 **PRINCE METTERNICH** (1773-1859) *the balance-of-power dude*

As Austria's foreign minister and the paramount force at the Congress of Vienna in 1814-15, he was the architect of the post-Napoleonic order in Europe that strove to prevent the dominance of any single nation. Metternich scorned democracy as a "decomposing principle" and warned a visiting Harvard professor that America "cannot end in a quiet, ripe old age." Love or hate his reactionary heart, you have to give Metternich credit for bringing stability to a war-ravaged continent. The nineteenth century was the pinnacle of

European civilization, and one-third of it—1815 to 1848—is known as the Age of Metternich. So famed for intrigue was this disciple of Machiavelli (40) that when he died, a diplomat asked, “I wonder what he meant by that.” Henry Kissinger, who received a collection of Metternich’s writings as a gift from French politician Valéry Giscard d’Estaing, was a pale imitation of the master, a Metternich *manqué*. **17,654**

180 EDMUND BURKE (1729–1797) inspiration to political conservatives the world over

His *Reflections on the French Revolution* is to Barry Goldwater’s *Conscience of a Conservative* what a Tolstoy (34) novel is to an Archie comic book. Burke argued that political virtue derives from tradition and moral authority, and he opposed democracy as mob rule. Perhaps surprisingly, he sympathized with the American Revolution as justified by British intransigence (though he lamented America’s “savage men”). Burke also fought to ease British rule in Ireland and India. He denounced the French Revolution for its murderousness, and his loathing of all utopian contrivances looks smart today, anticipating the social-engineering horrors of fascism and Communism. “The only thing necessary for the triumph of evil is for good men to do nothing,” he said. Burke dabbled in aesthetics, writing a tome in which he commented on everything from cloudy skies to the symptoms of love, including “breath drawn slowly, with now and then a low sigh.” **17,528**

181 KEMAL ATATÜRK (1881–1938) toppler of the tottering Ottoman Empire

Young Mustafa Pasa took the Arabic name Kemal, meaning “perfection,” for excellent work in math. Military and political prowess were his real strengths, however. Like other young officers, he

wanted Turkey freed from the Ottoman yoke. So Kemal resigned from the service, built civilian and military support, and in 1923 founded the nation and was named its first president. These developments prompted the last Ottoman sultan to flee the country. Kemal led the new republic with an iron hand, thrusting the nation once known as “the sick man of Europe” into modern times. He closed Islamic religious institutions, threw out the Arabic alphabet in favor of the Latin one, modernized legal and educational systems, and encouraged Western dress. He also pushed adoption of surnames. Of course, the one he reserved for himself was Atatürk, meaning, “father of the Turks.” **17,514**

182 SAMUEL JOHNSON (1709–1784) English man of letters

His conversation, immortalized in Boswell’s biography, prompted the actor David Garrick to comment: “He shakes laughter out of you.” His aphorisms (“Second marriages are the triumph of hope over experience”) and putdowns (“Nobody ever wished it longer,” he said of Milton’s (53) *Paradise Lost*) are legendary. His works include his landmark *Dictionary of the English Language* and the ten-volume *Lives of the Poets*. Though he was a Tory royalist and was hanged in effigy by the American revolutionaries, his rise from bookseller’s son to literary lion fits the American ideal of the self-made man. And his political stands resonate today, including his denunciations of capital punishment and Europe’s rapine of native populations. “How is it,” he asked, rebuking the colonists, “that we hear the loudest yelps for liberty among the drivers of Negroes?” **17,480**

183 IGOR STRAVINSKY (1882–1971) the Picasso of classical music

Granted, Debussy (274) rejected music’s rules of harmony, but Stravinsky rejected all the rules.

Gone were pretty melodies and conventional orchestrations; Stravinsky favored harsh, unruly, clashing noises. The son of a Russian opera singer but hardly a prodigy himself, Stravinsky abandoned law studies after endearing himself to composer Nikolay Rimsky-Korsakov. Stravinsky ranks as the most important classical composer of the twentieth century for his sounds that were "fierce, like a toothache," interspersed with "agreeable harmony, like cocaine." About his discordant *Le Sacre du Printemps* (*The Rite of Spring*), one horrified critic asserted the ballet was better called the "Massacre" of spring. When it premiered in Paris in 1913, the dancers couldn't hear the music over the audience's boos and catcalls. Hard on the ear yet haunting in its own way, *The Rite of Spring* abandoned musical conformity and became the standard by which modern classical music is measured. **17,472**

184 **GEORGE ELIOT** (1819-1880) *probing novelist*

Eliot was the pen name of Marian Evans, a plain provincial woman who evolved from Evangelical Christian to free-thinking essayist. Evans surprised friends by taking up with married journalist George Henry Lewes. Fulfilled in her personal life, she blossomed as a novelist, becoming a major literary voice in the nineteenth century. She wrote the acclaimed *Adam Bede*, the autobiographical *The Mill on the Floss*, and her masterpiece, *Middlemarch*. While her contemporaries were writing romantic tales, Eliot's probing analysis of her characters' psychology presaged twentieth-century fiction. Evans used a pseudonym for fear that critics would pan her books if they knew her living arrangements. That changed when a crackpot clergyman claimed he was really George Eliot. Evans's pride couldn't bear it, and she finally owned up. Though her

literary career flourished, Victorian society shunned her. She lived with Lewes for twenty-four years until his death in 1878. **17,403**

185 **DAVID HUME** (1711-1776) *radical skeptic*

When Samuel Johnson (182) was told that the dour Scottish philosopher Hume had denied the existence of God, Johnson exploded, "He lies, sir." Hume held that truth is unattainable; the mind is but a collection of sensations, and there is no such thing as cause, only the mental impression of a conjunction of events. If he were alive today, Hume would declare the mind to be a sophisticated computer. Many believe he was the most brilliant philosopher to write in English. His extreme skepticism reinvigorated scientific inquiry, even calling into question Newtonian physics, and his thought was a major influence on such figures as Immanuel Kant (49) and Auguste Comte (130). Passion was not unknown to him: He fell in love with a French countess and feuded with Jean-Jacques Rousseau (19). His fondness for food prompted a contemporary wit to write: "David Hume ate a swinging great dinner / And grew every day fatter and fatter; / And yet the huge bulk of a sinner / Said there was neither spirit or matter." **17,401**

186 **ALBRECHT DÜRER** (1471-1528) *foremost German Renaissance artist*

Dürer basked in the glow of Renaissance masters in Italy, then brought this influence home to Northern Europe. By 1515, his astonishing technique and inventiveness—he combined rational use of perspective and proportion with highly realistic detail—earned him international fame. Dürer created masterful altarpieces and religious works, superb nature studies, portraits, self-portraits, and

copper engravings. Critics hail his prints, especially the woodcut *Four Horsemen of the Apocalypse*, depicting Pestilence, War, Famine, and Death. His graphics influenced Van Dyck (870), Rubens (281), Rembrandt (46), and El Greco (283). Dürer adored Italy and its artists. In 1506 he wrote from Venice: "Oh how cold I will be away from the sun; here I am a gentleman and at home a parasite." Always pious, Dürer met Martin Luther (3) in 1517 and became a devoted follower. Nonetheless, Catholic leaders so esteemed the work he'd done for their churches that prelates joined Protestants in mourning his death. **17,334**

187 RAMANUJA (1017–1137) Hindu theologian

After he had a vision of the god Vishnu, he worshiped the deity daily and preached the doctrine of love for God until his death at age 120. Ramanuja thus transformed one of the world's great religions from a set of rituals aimed at liberating practitioners from the cycle of death and rebirth into a devotional faith. By holding out the promise of salvation through God's grace, he reinvigorated Hinduism. Today, four thousand years after its beginnings in the Aryan tribes that would one day conquer India, it flourishes. **17,295**

188 MARK TWAIN (1835–1910) turning point in American fiction

We applaud Twain's body of work, from *The Adventures of Tom Sawyer* to *A Connecticut Yankee in King Arthur's Court*. But we second Ernest Hemingway (388), who said all modern American literature comes from one book. He meant *The Adventures of Huckleberry Finn*, the story of a teenager fleeing his abusive father by rafting down the Mississippi River with a runaway slave. Beyond its hijinks and humor, the 1884 novel plumbs the American psyche and its frenetic drive

for new frontiers after "civilizing" old ones. Too bad some modern readers interpret it as racist. In his fiction Twain used American themes, settings, and southern vernacular to help create an authentically American literature divorced from British and European culture. "Mark twain!" the cry of Mississippi boatmen sounding shallow water, was the pseudonym of steamboat-pilot-turned-writer Samuel Langhorne Clemens. **17,292**

189 K'ANG-HSI (1654–1722) magnanimous Chinese emperor

He was as important to China as his contemporaries who molded their European nations into dominating powers: Louis XIV of France (63), Peter the Great of Russia (27), and William III of England. K'ang-hsi established the territorial contours of modern China by conquering Taiwan and Mongolia, making Tibet a vassal state, and neutralizing Russian power on his borders. He was a conscientious monarch who cut taxes, built public works, and patronized the greatest of Chinese artists. Every child, including K'ang-hsi's own twenty-eight, learned thrift, humility, and lawfulness from his Sixteen Sacred Injunctions, a distillation of Confucian wisdom that guided daily conduct. They ranged from the spiritual injunction number three—"observe filial piety and brotherly love"—to the simple and practical number fourteen: "pay your taxes to ward off being dunned." **17,242**

190 ALEXANDER HAMILTON (1755–1804) American statesman and monetary mandarin

Okay, Hamilton was an opportunist with monarchist leanings who quarreled with everybody—Washington (22), Jefferson (64), John Adams (214), James Madison (268), Aaron Burr—and wrote a friend that "the whole world is a mass of

fools and knaves." Even so, we rate him coequal to Jefferson in his influence on the early Republic. America's first and greatest treasury secretary, he secured the nation's financial credibility by insisting the Revolutionary War debt be paid off, and he championed a strong central government that endures today. What a waste that at seven A.M. on July 11, 1804, a bullet fired in a duel by the traitorous Aaron Burr tore into Hamilton's abdomen at six hundred miles an hour, splintered his spine, and extinguished the life of this West Indies-born Anglophile bastard son of a French Huguenot tart and her Scottish lover, this pamphleteer with a weakness for pseudonyms like Pacificus, this adulterer forced to confess his "indelicate amour" for a blackmailer's wife, this brilliant Founding Father. **17,120**

191 ELIZABETH OF HUNGARY (1207-1231) *model of Christian charity*

Absolute evil has more lasting influence than absolute good, and that's why despots like Hitler (20) and Genghis Khan (43) outrank Elizabeth on our list. Yet Saint Elizabeth's role of do-gooder, coupled with her position as queen of Hungary, made her a saintly model for generations. Married at age thirteen to Louis of Thuringia, Elizabeth endured the constant criticism of a mother-in-law who mocked her charitable nature. While pompous popes, corrupt confessors, and impious priests were giving Catholicism a bad name, Elizabeth demonstrated Christian charity. She established the world's first orphanage and built a hospital for lepers. She visited the sick and fed the poor. Then, under the influence of a mystic Franciscan who served as her confessor, she endured brutal beatings for piety's sake and spent the last of her twenty-four years deep in prayer and ministering to the poor. **17,106**

192 ANTON CHEKHOV (1860-1904) *literary luminary*

A medical student in Moscow, Chekhov was also family breadwinner, making money by churning out short comic sketches for magazines. "Don't envy me," he wrote his brother Alexander. "Writing brings me nothing but twitches." But writing short stories and plays soon became his life's work. Chekhov always put plot second to mood and characterization. His serious autobiographical story, "The Steppe," was hailed as a masterpiece. His most acclaimed plays—*Uncle Vanya*, *The Three Sisters*, and the perennially performed *The Cherry Orchard*—use ordinary dialogue to probe the human heart. A kind, unpretentious man, Chekhov inspired "a desire to be simpler, more truthful, more oneself," said writer-friend Maxim Gorky. But some countrymen felt Chekhov's works fell short because he delivered no strong political or social message. Even the great Tolstoy (34) sometimes missed the point. "Where do your characters take you?" he once asked Chekhov. "From the sofa to the junk room and back!" **16,976**

193 YOSHIDA SHOIN (1830-1859) *guru of revolutionary Japan*

He was obsessed with the notion that Japan would be subjugated by the West unless it overthrew traditions. When American admiral Matthew Perry steamed into Tokyo Bay and frightened Japan out of its isolation, Shoin stowed away in order to record the secrets of the West. He was caught before the ship sailed. Then he opened a school that taught young nationalists the need for a modern army, industry, central government, and an aggressive foreign policy. They absorbed his zeal and later dominated the governments that put Japan on a modern course. He was executed for plotting to kill a leader of

the old regime. Novelist and Asia hand Robert Louis Stevenson (756) wrote of Shoin in 1880: "He failed in each particular enterprise that he attempted; and yet we have only to look at his country to see how complete has been his general success." **16,937**

194 JAMES COOK (1728–1779) explorer who made the South Pacific British

Captain Cook's secret weapon was sauerkraut. Rich in vitamin C, it kept his crews healthy while other captains wondered why scurvy was killing their men. Cook needed able men. On three of the longest exploratory cruises in history, he charted the South Pacific, claimed Australia and New Zealand for Britain, brought back exotic flora, and ended speculation that there were habitable continents south of Africa. Cook, an eighteen-year-old farmer with no connections when he went to sea, advanced on merit. He could be stern, but his men admired him, never more than when he let them make love, not war, among the women of Tahiti. Not all the natives were friendly. A mob of Hawaiians stabbed Cook to death when he tried to arrest their king for being lenient with natives who stole a boat. **16,912**

195 BENITO JUÁREZ (1806–1872) Mexican liberator

Juárez barely cleared five feet and had the dark strong features of his Zapotec Indian heritage. He battled prejudice from fellow Mexicans, who dubbed him "the little Indian." But Juárez was fortified with an iron will that helped him rise from poverty and illiteracy to become a law school graduate. He was a born executive who won national prestige as governor of his home state of Oaxaca, then justice minister, and finally president of Mexico. He helped overthrow the

dictator, General Santa Anna, championed a democratic federal republic, and resisted Napoleon III's military drive to establish a Mexican empire. Santa Anna never could figure Juárez out. The two met in 1829 when Juárez was a barefoot peasant waiting on the general's table. "It is amazing that an Indian of such low degree should have become the figure in Mexico that we all know," Santa Anna mused. **16,872**

196 CLAUDE MONET (1840–1926) leader of the impressionist school

Monet's finest achievement: his huge painted panels of lilies floating in his water garden at Giverny, France. One set hangs in the Museum of Modern Art in New York City, another in Paris. We second the dealer overwhelmed by these works, who found the water and sky had "neither beginning nor end. It is mysterious, poetic, delightfully unreal." The panels were typical of Monet, who made a habit of painting numerous studies of the same motif, be it haystacks or Rouen Cathedral, to capture changes in light and atmosphere as time passed. The very name *impressionism* comes from a critic's denigration of his *Impression: Sunrise*, 1872. Monet produced about three thousand works, mostly seascapes, landscapes, and river scenes. Artist Eugène Boudin introduced the eighteen-year-old Monet to the then-uncommon approach of painting outdoors; it changed Monet's life. "Suddenly," he said, "a veil was torn away. I had understood—I had realized what painting could be." **16,861**

197 DANIEL DEFOE (1660–1731) cornerstone of the English novel

Defoe's two splendid novels, *Robinson Crusoe* and *Moll Flanders*, broke new ground by exploring human nature in matter-of-fact, vividly detailed

narratives. But these books came late in his life. He'd given up as a tradesman after risky moves mired him in debt. A Protestant Dissenter, Defoe had written persuasive political pamphlets and even fought on the losing side against Catholic king James II. After he was pilloried by the Tories on charges of treason—for writing an ironic political pamphlet—Defoe switched to survival mode. Didn't matter which party was in power, Tory or Whig, he was their man as pamphleteer and intelligence agent. Biographers say he died while hiding from creditors hounding him for a twenty-five-year-old debt. **16,849**

198 **DOMINIC** (1170-1221) *the Catholic Church's teacher*

Before Saint Dominic, the only good heretic was a dead one. Dominic didn't end that belief (after all, the Inquisition was just getting off the ground), but he created an approach that differed radically from the blood-and-guts way of doing business. Dominic, the first of the Catholic Church's great preachers, believed in his power to convert heretics back to orthodoxy—without drawing blood. His Order of Preachers prepared friars who traveled about Europe converting unbelievers. He established chapters near universities, and soon his order was linked to learning. In a radical departure from the monastic tradition of small autonomous monasteries, he established himself as head of his order throughout Europe. Today the Dominicans are one of only four large international orders of monks, and they continue the tradition of education and preaching. **16,842**

199 **HIERONYMUS BOSCH** (1450-1516) *far-out painter*

Almost nothing is known of him except his forty surviving artworks, but what a tale they tell.

Think of him as a Dutch Franz Kafka (233) with a paintbrush. His imagination runs riot, concocting freak animal-human-tree hybrids and demons with rats' faces and birds' claws, snatching at fallen souls. His visions are no dilettante's panorama of the absurd, however, but a mystic's revelation of sin's perils. His depictions of man's ensnarement in evil are glued together by symbolism—an owl for heresy, bagpipes for lust, a wizard for Satan's deception. It was perhaps inevitable that twentieth-century pundits would declare his dreamlike landscapes the harbinger of surrealism, with its Freudian twists and Salvador Dali (735) turns. But other modern critics reckon him too weird to make that claim. Though he influenced others, notably Bruegel the Elder (256), says art historian Horace Shipp, "In truth he stands alone, outside all schools." **16,821**

200 **NICOLAS APPERT** (c.1750-1841) *inventor of canned food*

Before Appert, the French army was underfed. Meat and vegetables spoiled before Napoleon's (16) soldiers could eat them. The French government offered a prize for a practical way to preserve provisions. Thus began this former candy-maker's fourteen-year flirtation with preservation. He won the 12,000-franc prize in 1810 with his method of preserving food in glass bottles that had been sealed and heated in boiling water. Eventually Appert changed his containers to steel cylinders plated with tin. Just why do we rank Appert and his "canning" invention so high? Well, his methods triggered a nineteenth-century revolution in the kitchen that eased women's burdens and changed the eating habits of people around the world. Of course, gourmets among us would argue that canned peas are inedible, but armies have marched and triumphed on them. **16,809**

The next group includes our highest ranking sports figure: a man who won no championships, broke no records, and never signed a sneaker contract.

Eat your hearts out Babe, Jackie, Michael, and Muhammad Ali. Number 293, James Naismith, beats you all because he knew how to exercise his brain. In 1891, at a YMCA in Springfield, Massachusetts, he invented basketball, the only sport that is both new and universal.

Two Neanderthals competing to skewer a speedy roebuck for dinner invented track and field. The ancients played primitive forms of polo, golf, tennis, football, and soccer. Baseball is relatively new, but it has star status only in Japan and the Americas, and its appeal has slipped among modern fans, who crave continuous action. Fast-paced basketball is popular from Brooklyn to Beverly Hills, from Tblisi to Timbuktu.

In our rating system, mere athletes were unable to match Naismith's point totals for singularity and lasting influence. What is singular about Bret Favre, whose success depends on two thousand pounds of lineman? Athleticism has no

lasting influence. A race won, a home run, even a knockout punch, exists for only a moment.

To make the top one thousand, a sports figure had to be more than a player. Muhammad Ali and Jackie Robinson championed social change. Babe Didrickson Zaharias inspired women. Henry Wingfield, Henry Rous, Pierre Coubertin, and Alexander Cartwright wrote rules and organized events. John Sullivan, Babe Ruth, Jim Thorpe, Pele, and Michael Jordan helped create the global mass sports culture that emerged in the twentieth century.

The only athlete we included solely for his physical prowess was Roger Bannister, who in 1954 ran the first sub-four-minute mile.

201 JOHN MAYNARD KEYNES (1883–1946) key economist of the twentieth century

The British scholar's seminal work, *The General Theory of Employment, Interest and Money*, overturned the prevailing laissez-faire view and argued that governments should increase spending in recessions to mitigate the dislocations of the business cycle. In a surprisingly short time his ideas triumphed in both academia and the policy-making councils of the West. A devoted capitalist—some say he saved capitalism—Keynes dismissed Marxism as “dreary, out-of-date controversializing.” The Cambridge don also had an obsession with people's hands and became so entranced with President Franklin D. Roosevelt's (37) “shortish round nails” in a 1934 meeting with him that he lost his train of thought. A homosexual, Keynes nonetheless married the ballerina Lydia Lopokova, to the disapproval of his Bloomsbury literary-circle friends like Lytton Strachey, who called her a “half-witted canary.”

16,789

202 TYCHO BRAHE (1546–1601) stargazer extraordinaire

Brahe's great gift to astronomy was his highly accurate data based on naked-eye observations. It gave his student, Johannes Kepler (33), a firm foundation for his theories on how planets revolve around the sun. When Brahe was thirteen, he witnessed a total eclipse of the sun, and it opened his eyes to astronomy. The young Dane learned to estimate distances between stars using compasses and cross-staffs. In 1563 he observed Jupiter and Saturn overlap. Copernicus (18) had predicted it would happen but got the date wrong. Brahe decided to dedicate his life to the accurate recording of heavenly sightings. His reputation blossomed in 1572 with the discovery

of a supernova in the constellation Cassiopeia. The news helped shatter Renaissance security in a fixed and certain universe.

16,751

203 LEO IX (1002–1054) the rulemaker for priests

The Alsatian priest Bruno became Pope Leo IX because he had pull. His cousin Henry III was ruler of the Holy Roman Empire, and when emperors spoke, electors listened. It was a corrupt start to a saintly papacy. Leo dedicated his reign to rooting out devilry in the church, and in 1049 he codified rules for priestly behavior. Churchmen could no longer marry, buy their holy offices, charge their flocks for sacraments, or go to war. Simply put, holy people were required to act—well, holy. After Leo the rules were often ignored, but they remained as beacons whenever the church chose the road to reform. Leo shouldn't have broken his own rule against fighting. In 1053 he tried to stop Normans from ravaging southern Italy, but his army was mauled at the battle of Civitate, and Leo remained a captive most of his remaining days.

16,702

204 W.E.B. DU BOIS (1868–1963) mover and shaker

A Harvard-educated sociologist, Du Bois became convinced that protest was the only way black Americans could change a racist system. In writings, speeches, and his newspaper, *The Crisis*, he clashed with conservative Booker T. Washington (458), who preached the status quo while urging black people to seek economic gains. Du Bois founded the Niagara Movement in 1905, a precursor to the National Association for the Advancement of Colored People in 1909. Though he embraced Marxism and frequently visited the Soviet Union, he ranks toward the top of the confrontational strain of black protest of

racial injustice in America. In 1951 Du Bois was indicted as an unregistered agent for a foreign power. He joined the Communist Party in 1961, moved to Ghana, and renounced his U.S. citizenship. His autobiography, penned in Ghana, declares: "I do not apologize for living long. High on the ramparts of this blistering hell of life, as it must appear to most men, I sit and see the Truth." **16,681**

205 JAMES CLERK MAXWELL (1831-1879) *physicist with an electrifying message*

In our age of corporate downsizing, we find it comforting to note that this Scottish genius who originated the theory of electromagnetic radiation, developed the field equations that set the stage for Einstein's (17) special theory of relativity, and nourished ideas that blossomed into quantum physics got laid off early in his teaching career. He got the ax in a merger of two colleges and had to hustle to find a job. "Before Maxwell, physical reality was thought of as consisting in material particles," Einstein wrote. "Since Maxwell, it has been thought of as represented by continuous fields. This change in the conception of reality is the most profound and the most fruitful that physics has experienced since the time of Newton." Maxwell died at age forty-eight of abdominal cancer, the disease that claimed his mother at the same age. He was buried without fanfare in a village churchyard. **16,671**

206 EMMELINE PANKHURST (1858-1928) *British radical suffragette*

While the word *suffragette* was a snide pejorative in America, it was a badge of honor that British activists like Pankhurst wore proudly. And theirs was not a battle for the weak of heart. When Parliament failed to respond to polite entreaties

for suffrage, Pankhurst got nasty. She had met with a quick and early success in 1894, when British women secured the vote in local elections. But when it came to voting on the big boys in Parliament, the legislators would not budge. Pankhurst and her comrades heckled public speakers; their suffrage meetings triggered rioting. They clashed repeatedly with the bobbies and were jailed. In prison their publicized hunger strikes created a public relations nightmare for the government. Aided by her daughters, Pankhurst lobbied strenuously for only about a decade until World War I began, whereupon she devoted her energy to the British effort. She died just a few weeks after British women won full voting rights in 1928. **16,532**

207 MARCEL PROUST (1871-1922) *literature's time traveler*

Proust's literary triumph, *Remembrance of Things Past*, is one of the greatest achievements in world literature. Funny, since it was triggered by a snack. The French author dipped a cake into his tea, and the taste of it transported him to childhood teas at Aunt Leonie's and blissful family walks on sunny paths in his native Normandy. Proust's work is an archaeological dig in one man's mind to uncover meaning in his life. He employs what psychologists call mnemonic combination: the association of colors, music, and names with scenes and sensations of the past. The astounding seven-volume novel—presented entirely as an interior monologue—is the longest ever written. Proust never finished revising the last few volumes before he died. It takes perseverance to stay with the long and convoluted sentences. Ezra Pound (367) thought criticism of Proust's writings deserved to be written in one paragraph, seven pages long, and punctuated only by semicolons. **16,521**

208 **NIELS BOHR** (1885–1962) *giant of the subatomic world*

He applied quantum theory to atomic structure, postulating that the atom could emit radiation only in “quantum jumps.” Confused? Well, Bohr said anybody who didn’t think quantum theory was crazy hadn’t been listening. Einstein (17) called his work “the highest form of musicality in the sphere of thought.” His research into atomic spectra and X-rays is an invaluable contribution to science. In essence, he discovered that electrons move around the nucleus, and he described how atoms emit and absorb energy. Asked what direction physics would take, Bohr quoted Goethe’s (131) *Faust*: “What is the path? There is no path. On, into the unknown.” Born of a Jewish mother, Bohr fled Denmark on a fishing boat to escape the Nazis, and he later joined the project to build the atomic bomb. **16,507**

209 **JANE ADDAMS** (1860–1935) *builder of the settlement house movement in America*

At the height of her popularity in 1910, reformer Addams was called “the only saint America has produced.” The Mother Teresa (772) of her generation, Addams finished second behind Thomas Edison (28) in a newspaper reader survey to name the most useful Americans. Addams rebelled against the idleness imposed on middle-class women. While others shrugged off this ennui with a sip of sherry and another stitch on their petit point samplers, Addams believed it morally wrong to do nothing when so many people needed so much. She created a settlement house of women like herself who gave assistance to immigrant Chicago. Hull House was the original community house, providing shelter, education, activities, and a sense of belonging to impoverished women and children. Addams’s pacifism during

World War I tarnished her reputation among contemporaries, but she was vindicated with the award of the Nobel Peace Prize in 1931. **16,502**

210 **ALDUS MANUTIUS** (c.1450–1515) *publisher to the Renaissance*

But for Italian humanist Aldus Manutius, this whole book might look like this sentence.

A missionary for the wondrous learning of the ancients and a crafty businessman, Aldus made classical texts shorter than before by using Roman letters that were slimmer than Gutenberg’s Gothic letters. *The most compact form was italic, a slanted typeface invented by Aldus’s craftsmen in 1501.* After Aldus, most books were no longer printed imitations of manuscripts. His books were also cheaper because he printed them in editions of a thousand—five times as many as other publishers. The result was a wide dissemination of classical learning to an increasingly literate Europe. We marvel at the list of writers whose works Aldus was the first to publish in book form. Among the Greeks alone were Sophocles, Herodotus, Xenophon, Plato, and Demosthenes. **16,482**

211 **ROBERT KOCH** (1843–1910) *pioneering bacteriologist*

Before Koch, doctors couldn’t even begin to cure certain diseases because no one knew what the germs looked like. Koch identified the bacteria that cause anthrax, tuberculosis, and cholera and started science on the road to keeping those diseases in check. We salute his accidental discovery of a way to obtain pure specimens of the deadly bugs. In the liquid gelatin cultures used up to Koch’s time, bacteria would jumble together like marbles in a sock. When a discarded potato slice that was laden with germs blossomed into multi-colored bacteria, Koch realized that solids were

better than liquids. From then on, cultures were grown on hardened gelatin. Koch became so famous, his 1890 report on a test for tuberculosis was misconstrued as the announcement of a cure. The world was disappointed, but it was a step toward the eventual defeat of the disease. **16,473**

212 THEODOR HERZL (1860-1904) *propagandist for a Jewish state*

Herzl gave meaning and hope to the Passover incantation "Next year in Jerusalem." He grew up surrounded by rampant anti-Semitism in Austria and, when he moved to Paris to escape it, was horrified to discover the same climate of hate. Although he had advocated assimilation, journalist Herzl became convinced—after reporting on the persecution of French Jewish soldier Alfred Dreyfus—that the Jews needed their own state. Herzl ignored friends who thought him crazy and published his pamphlet *The Jewish State* in 1896. As he explained, "We want to lay the foundation stone for the house which will become the refuge of the Jewish nation." His campaign to recreate the Jewish homeland of Israel in Palestine was called Zionism. Although he died of a heart ailment more than forty years before the State of Israel became reality, Herzl's remains were moved there in 1949 to a hill overlooking the town of Mount Herzl. **16,465**

213 THOMAS STARZL (b. 1932) *transplant pioneer*

As a medical instructor at Northwestern University, Starzl decided to buck conventional medicine and devote his life's work to transplanting organs. In 1963 he performed the first liver transplant on a three-year-old boy who bled to death on the operating table. After other tragic failures and widespread criticism, Starzl immersed himself in research and spent twenty years perfecting

surgical techniques. That, together with the wonder drug cyclosporine, which suppresses the body's urge to reject foreign organs, made transplants routine. Even heart transplants, pioneered in 1967 by South African surgeon Christiaan Barnard, are performed successfully today. Recently Starzl has championed the use of the antirejection drug FK-506 as more effective than cyclosporine. Described as "volatile" by coworkers, Starzl nevertheless won admiration for his devotion to transplant patients and their cause. His interest reaches into history. "How much more complete the world might have been," he mused, "if Mozart had been treated with renal transplantation instead of dying at the age of thirty-five." **16,442**

214 JOHN ADAMS (1735-1826) *American revolutionary*

Adams was the supernova of America's most illustrious family, whose other lights included son John Quincy, the sixth president; second cousin Samuel (263), revolutionary firebrand; and grandsons Charles Francis, Brooks, and Henry, scholars. Jefferson (64) wrote the Declaration of Independence, but Adams was its fiercest proponent in the Continental Congress. As America's second president, he considered his resistance to the clamor for war with France—a decision that saved countless lives and perhaps the Union itself—"the most splendid diamond in my crown." In the national consciousness Adams has gained nowhere near the stature of Founding Fathers Washington (22), the national deity; Jefferson, the national genius; or Franklin (54), the national Renaissance man. Perhaps this is because he was, in fact, short, as well as pudgy (his enemies dubbed him "His Rotundity"), dour, and a little fussy. Yet of the four, Adams alone refused to own slaves. **16,376**

215 **FRIEDRICH NIETZSCHE** (1844–1900) *mad poet of modernism*

One of the most influential philosophers of all time, venerated by practically every intellectual giant of the twentieth century, Nietzsche pushed the Enlightenment to its ultimate secular conclusion. "God is dead," he said, and humans must seek meaning in religion's ashes. His ideal was the passionately creative man, or "superman." His thinking, notably his doctrines of perspectivism (the relativity of all knowledge) and man's will to power, set the stage for the modernist culture of deconstructionism, nihilism, and alienation. Poor Nietzsche! Raised with his budding-Nazi sister by a domineering mother and two maiden aunts, he was plagued by eye and stomach ailments before descending into syphilis-induced insanity. Hitler (20) adored him, but he was no anti-Semite. Historian Edward O'Brien said Nietzsche longed for the Christian and pagan godheads of Christ, Apollo, Lucifer, and Dionysus to be united in one breast—his own. **16,359**

216 **JOMO KENYATTA** (1896?–1978) *African nationalist*

When Henry the Navigator (153) proposed in 1434 that Portugal explore unknown worlds, the first boats sailed for the unknown continent to the south. From then on, European imperialists plundered the Dark Continent for gold, ivory, jewels, and ultimately, its people. While the slave trade had been abolished by the time Kenyatta, a member of the Kikuyu tribe, was born, he railed against white-only land laws and British colonization. Hailed as a natural leader, Kenyatta preserved rich African traditions while promoting modernization. His movement climaxed with his imprisonment for seven years during the Mau Mau rebellion against Great Britain. While in prison he was elected president of the rebel gov-

ernment. British colonial rule ended officially in 1964, when he was elected president of Kenya, a position he held until his death. **16,279**

217 **ALFRED NOBEL** (1833–1896) *dynamite philanthropist*

Nobel's story is *It's a Wonderful Life* with Swedish subtitles. When his brother Ludwig died in 1888, some foreign newspapers erred and reported it as Alfred's demise. They painted him as the inventor of dynamite who had amassed monumental wealth by becoming a merchant of death. Actually, Nobel's vision in developing the explosive, dynamite, from highly volatile nitroglycerin, was to use it for nonmilitary purposes. The rare opportunity to read his own obituary and see how some evaluated his life shattered Nobel. He decided to dedicate a large portion of his fortune to the cause of peace. Thus, according to his will, \$8 million in seed money went to launch the Nobel Foundation in Sweden in 1900. Ever since, the foremost scientists, authors, and peacemakers have received the world's most coveted prize. **16,250**

218 **MATSUO BASHO** (1644–1694) *high priest of haiku*

Japan's most revered poet was a farmer's son who quit a job in a waterworks to devote his life to verse. He transformed the three-line, seventeen-syllable haiku, Japan's most popular poetry form, from the courtly style of his predecessors into a form with no subject-matter boundaries. "The old verse can be about willows," he said. "Haiku requires crows picking snails in a rice paddy." Basho popularized the notion that haiku could be about anything from simple domestic images ("Wrapping the rice cakes, with one hand she fingers back her hair.") to contemplation of death ("Sick on a journey, my dreams wander the

withered fields.") Millions of ordinary people around the world who write haiku to express their deepest thoughts owe Basho a huge debt. Paraphrasing one of his famous verses, we say:

*On haiku's high bough,
Basho alone is perching
This millennium*

16,217

219 **GIOTTO** (c.1267-1337) *the grandfather of Italian art*

Although a contemporary said Giotto was as ugly as an Italian man could be, he possessed an unnerving ability to create beauty. Before his frescoes fueled the Golden Age of Florence, painting had been fading as a flat, lifeless art form. Giotto's ability to create depth was so uncanny that some people believe he invented perspective. Not so. Giotto paid attention to color, form, and the arrangement of his subjects. He placed people in the foreground of his frescoes so that viewers could see them at eye level. He played with light to give the illusion of depth. To top it off, he always told a story. He never had the polish of Michelangelo (13) or Leonardo (9), but he generated such enthusiasm for painting in Florence that his innovations whetted the appetite of Italy for the Renaissance masters who followed. 16,203

220 **EMIL VON BEHRING** (1854-1917) *pioneer of serum therapy*

Behring worked in a Berlin laboratory in 1890, injecting rabbits with tiny amounts of tetanus toxin produced in bacterial cultures. Weeks later, the German doctor drew serum from the rabbits and injected it into mice that had just received deadly doses of tetanus toxin. The rodents scampered away, healthy as ever. After announcing that breakthrough, Behring published another paper describing the same successful experiment

with diphtheria toxin. He dubbed the toxin-neutralizing agent "antitoxin." But it had yet to prove effective with humans. The crucial test came on Christmas Eve 1891 when a Berlin doctor injected the antitoxin into a child dying of diphtheria. Within hours her fever broke. Thousands more would be saved the same way. For that, Behring and his Japanese colleague, Shibasaburo Kitasato, received the first Nobel Prize for physiology or medicine in 1901. 16,163

221 **HENRY IV** (1553-1610) *peacemaker of France's religious wars*

Let's hear it for kings like Henry of Navarre, who lack convictions. He led the Protestant army that conquered France and then cast away his faith, like an old cloak, to make himself palatable to the Catholic majority. "Paris is well worth a mass," he supposedly declared. The dynasty that Henry started lasted two hundred years, and he was a hero to later Frenchmen because he was one of them: tolerant, learned, fun-loving, amorous. He raised his legitimate children and bastards as one big happy family; his favorite among his sixty mistresses was Henriette d'Entragues. Henry loved her even when she became a gluttonous fleshy nag like his wife, Marie de Médicis. Henry craved the hunt and fine dining and was suffering from gout when he was stabbed to death in his coach by François Ravallac, a Catholic fanatic. 16,159

222 **JAWAHARLAL NEHRU** (1889-1964) *political heir of Mahatma Gandhi and first prime minister of India*

Educated at Harrow and Cambridge, cradles of British elitism, Nehru helped negotiate India's independence from Britain in 1947 and led the new nation until his death. While he paid lip service to Gandhi's (12) doctrine of nonviolence,

he battled Pakistan in Kashmir, seized Goa from Portugal, and fought border skirmishes with the Chinese. And while he preached neutralism in foreign affairs, he was the only nonaligned leader to support the Soviet Union's invasion of Hungary. History will forgive him. Nehru's influence was so enormous that Adlai Stevenson said he "wore a halo." Luckily, the halo didn't enable him to foretell events. His only child, the future Prime Minister Indira Gandhi (791), was assassinated in 1984; her son Sanjay died in a plane crash; and Sanjay's brother Rajiv, the third prime minister of the dynasty, was killed by a bomber in 1991. **16,113**

223 BALTHASAR DE BEAUJOYEUX

(d. c.1587) creator of
the original ballet

Beaujoyeux was an Italian violinist who doubled as a servant to French queen Catherine de Médicis (632). He was so good at organizing parties for the royal court that he was placed in charge of the celebration to commemorate the marriage of the duke of Joyeuse and Marguerite of Lorraine in 1581 at the Hôtel de Bourbon in the Louvre. So he put on a show. The result, his *Ballet Comique de la Reine*, is generally regarded as the world's first ballet. It was a five-and-a-half-hour extravaganza of scenes from the legends of the mythological enchantress Circe. The dance, which cost more than 3.5 million francs, featured Roman gods spinning in circles and other dazzling geometric patterns. But because it was the first ballet as we know it, we tip our tutu to this Beautiful/Joyful kind of guy. **16,111**

224 WILHELM II (1859–1941)

militarist German kaiser
blamed for World War I

If only he had listened to his mother. She was an English princess who thought Germans were uncivil-

tured boors, and she tried to make Wilhelm a liberal Anglophile. But he was a pumped-up Prussian from the tip of his hobnailed boots to the top of his spiked helmet. If Grandma Victoria's (91) England could have colonies and a big navy and boss other countries around, he reasoned, Germany could, too. As kaiser, he dismissed the wily Bismarck, appointed pliant ministers, heated up the arms race, and became the aggressor in World War I. Four years and ten million deaths later, he abdicated. After the war Wilhelm lived in a safe haven provided by the Dutch government; he remained an unrepentant fool to his final days. When Hitler (20) conquered Paris in 1940, the old kaiser sent the new Führer a congratulatory note. **16,106**

225 BARTOLOMEO CRISTOFORI (1665–1731)

grand piano maker

Talk about an idea whose time hadn't come! Travel back to Florence around 1700. See how Italian harpsichord maker Cristofori tinkers with an invention we now call the piano. It's similar to the harpsichord, but instead of plucking strings, it produces loud and soft tones by using leather-covered hammers. The secret ingredient is escapement, a nifty mechanism that controls how the hammers strike strings and then rebound. But the world isn't ready for it. People swear by their harpsichords and clavichords. Even Voltaire (36), comparing the popular harpsichord to the piano in 1774, calls the latter "a boiler-maker's instrument." Years after Cristofori's death, however, something clicks and composers begin writing music for the piano. It really takes off after a pint-sized genius by the name of Mozart (52) finds its tones to his liking. **16,003**

226 FRANCIS XAVIER (1506–1552)

evangelist to the Indies

Xavier was one of seven original members of the

Jesuits, recruited by Ignatius Loyola (115) to lead lives of poverty and celibacy in imitation of Christ, and to spread the gospel. Known as the "Apostle to the Indies," Xavier found converts among the fisherfolk of India, the headhunters of the Spice Islands, and the cultural elite of Imperial Japan (whose hard-to-learn language he declared to be "the work of the devil"). His biggest contribution to the evangelical cause was his adaptation of the Christian message to local customs and his recruitment of local priests. He knew he would never again see his beloved Jesuit brothers, thousands of miles away, so he cut their signatures from the letters they sent and pinned them in his habit next to his heart. Xavier died of fever as he was attempting to storm the heathen gates of China. **15,974**

227 ELIZABETH BLACKWELL (1821-1910) *first American woman doctor*

What a bunch of overachievers! Blackwell and her sister Emily became doctors; another sister was a newspaper correspondent, another a writer; one sister-in-law, Antoinette Blackwell (267), was America's first woman minister, and another was famed suffragist Lucy Stone. Elizabeth was enraged when a friend died from a simple gynecological disorder. So she worked with doctors in the Carolinas, but was rejected as an applicant by most medical schools. She gained entry to Geneva Medical College in New York only after students voted to let her attend. Once there, however, students speculated that she was insane. One professor tried to bar her from the lecture on reproduction. As a doctor, she faced prejudice from other physicians, hospital staffs, and patients. Ultimately, with the backing of reformers like Horace Greeley and Henry Ward Beecher, she opened her own hospital for women and children in New York. **15,919**

228 LORENZO "THE MAGNIFICENT" DE' MEDICI (1449-1492)

*Florentine strongman with
a weak spot for great art*

His title was simply "first citizen," but he ruled Florence like a mafia godfather with a lawn full of statues. He stimulated the production of beautiful art simply by buying so much of it: stunning buildings, sculptures, and paintings by Michelangelo (13), Botticelli (331), Filippino Lippi, and Pico della Mirandola. Lorenzo dabbled in architectural design and wrote almost-not-too-bad verse about snoring shepherds, swooping hawks, and little bleating lambs. "If Florence was to have a tyrant she could never have found a better or more delightful one," said a contemporary with democratic leanings, Francesco Guicciardini. Lorenzo's love of art and wisdom was hyped. One hagiographer wrote that Lorenzo lamented on his deathbed that he had had no time to finish a great library he had planned. If you believe that, we've got a Ponte Vecchio to sell you. **15,906**

229 IVAN THE GREAT (1440-1505) *creator of the modern Russian state*

Through conquest, diplomacy, and his renunciation of Moscow's two-hundred-year allegiance to the Mongols, Ivan made Russia a European power to be reckoned with and created a sense of Russian destiny. When he assumed the throne, his realm consisted of just fifteen thousand square miles, less than half the size of present-day Indiana. With his son Vasily, he nearly tripled Russian territory, a start toward expansion that made Russia the world's largest nation. Ivan, the grand duke of Moscow, dreamed of making Russia the Third Rome, cherishing a monk's prophecy that while "the two Romes have fallen, the third does endure. Your Christian Empire shall last forever." To fulfill his vision, he claimed

to be a direct descendant of the Roman emperor Caesar Augustus, and he married the niece of the last emperor of Byzantium (the second Rome), a woman described by an Italian observer as a "mountain of fat."

15,873

230 **CARL LINNAEUS** (1707–1778) eighteenth-century Adam

Kingdom: Animalia; Phylum: Chordata; Class: Mammalia; Order: Primates; Family: Hominidae; Genus: Homo; Species: Homo sapiens. That about sums him up. Linnaeus's 1735 treatise *Systema Naturae* laid down a simple method of classifying plants by the way their flowers were formed. Then he turned his attention to the animal kingdom. His work was embraced by the scientific community because of the rapid discoveries of more and seemingly endless forms of life. Linnaeus's method, often sketched out like a massive family tree, is simply a filing system that allows researchers to sort out all life-forms. The genius of his system is that everything, from the minuscule amoeba to the elegant Easter lily to the massive elephant to as-yet undiscovered life-forms, has its niche.

15,866

231 **CLAUDIO MONTEVERDI** (1567–1643) first composer of music drama as we know it

Monteverdi's first published works appeared when he was fifteen, and he spent much of his career directing music at Venice's magnificent St. Mark's Church. Before he wrote the opera *Orfeo* in 1607, musical plays were just that: plays with music. Monteverdi intertwined the words and notes and added arias rich in new harmonies. That makes *Orfeo* the granddaddy of every opera and musical comedy, from those composed by seventeenth-century Frenchman François Lully to twentieth-century Englishman

Andrew Lloyd Webber. Monteverdi was both a learned innovator and a sycophant in search of patrons. "There is nothing in me that does not spring from your infinite goodness," he gushed to Cardinal Ferdinand Gonzaga in 1611. His apple polishing worked. The duke of Mantua paid most musicians with bread, veal, fish, candles, and salt; Monteverdi got gold.

15,854

232 **OLIVER EVANS** (1755–1819) industrial troubleshooter

Evans pioneered the development of high-pressure steam engines and created the automatic production line. This man never met a production snafu he couldn't unravel. What a pity the public didn't appreciate his vision. Consider the production line he created in the 1790s that used power from waterwheels and employed only machines to pummel grain into flour. One incredulous miller exclaimed, "It will not do! It cannot do! It is impossible it should do!" But it worked. Then there was his steam engine, which he adapted to process cotton, tobacco, and paper and, most importantly, to power steamboats. Evans predicted that the steamboat, together with the railroad, would help people travel "as fast as birds fly." Of course he didn't envision the airplane, but given a few more years, he would have.

15,762

233 **FRANZ KAFKA** (1883–1924) apostle of alienation

In the twentieth century perhaps only Proust (207) and Joyce (171) rival his impact on literature. The opening of *The Metamorphosis* captures modern man's neurotic self-absorption: "As Gregor Samsa awoke one morning from uneasy dreams, he found himself transformed in his bed into a giant insect." So powerful a hold does Kafka's surrealist imagery have on us that *Kafkaesque* has entered the popular vocabulary to

describe everything from the Nazi Holocaust that consumed his three sisters to the incongruities of our daily lives. Kafka's own torments read like a checklist of twentieth-century anxieties: the Oedipal revolt; the dead-end job; the troubled relationship with the opposite sex (he was horrified by the "hellish luster" of his fiancée's gold teeth). Fame eluded Kafka, and he died at age forty of tuberculosis. A friend disobeyed his instructions to destroy his manuscripts, giving the world the fruits of what Kafka called "a form of prayer." **15,755**

234 **ANDREAS VESALIUS** (1514-1564) *the body's tour guide*

For more than a millennium, the medical world followed the anatomical theories of the ancient physician Galen, who had dissected pigs, goats, and monkeys to formulate his ideas about the structure of the human body. Then Vesalius published his tome, *De Humani Corporis Fabrica*, proving that Galen's description of "animal" structure actually was strikingly different from "human" anatomy. By methodically dissecting cadavers, Vesalius showed the skeletal and muscular makeup of humans, creating the modern science of anatomy. A steady supply of corpses was provided by a criminal court judge who was interested in Vesalius's theories. The judge even delayed executions to fit Vesalius's dissection schedule. The Flemish Vesalius commissioned a series of anatomical drawings to illustrate his book, which provided a scientific description of the human body's skeleton, muscles, and nervous, reproductive, and digestive systems. **15,742**

235 **JOHN MCADAM** (1756-1836) *guru of gravel*

The next time you head down the lonesome highway, think of John McAdam, the Scottish

businessman-engineer. He taught road building so well, the word *macadam* is still a synonym for street pavement. He earned a fortune as a banker in British-occupied New York during the American Revolution, giving him the leisure to go home and live his youthful dream of improving Britain's abominable dirt highways. In 1823 Parliament adopted his plan. The solution was a veneer of stone that could bond with the dirt below. The type of stone didn't matter, as long as the pitch of the road permitted the water to drain away and keep the underlying dirt from turning mushy. Tar, asphalt, and cement came later, but McAdam's principles paved the way. **15,666**

236 **VILHELM BJERKNES** (1862-1951) *weather wizard*

The son of a Norwegian scientist, Vilhelm mastered the academic specialties of mechanics and mathematical physics. After years of studying hydrodynamics and thermodynamics, he devised a theory of air masses that is central to modern weather forecasting. He even crafted plans for predicting what the heavens held in store, based on conditions in the atmosphere and oceans. Pretty darn good for the early 1900s, when people trusted their lumbago to presage rain or looked to woolly caterpillars to warn of brutal winters. Now the heirs of Bjerknes use satellites, balloons, and radar to warn humanity of approaching storms. **15,651**

237 **MIKHAIL GORBACHEV** (b. 1931) *catalyst of Communism's collapse*

Gorbachev, last ruler of the Soviet Union, first sought to fix an evil system with sops he called *glasnost* and *perestroika*. But recognizing that his politically bankrupt and economically moribund empire had lost the cold war, he negotiated its surrender. "If you can't beat them, join them,"

his press spokesman Gennadi I. Gerasimov said. We debated whether to rate this baptized grandson of a devout Russian Orthodox woman higher. After all, he helped avert nuclear war. But if he hadn't put Communism on the trash heap of history somebody else would have. A turning point in his waltz with the West was his 1984 trip to London, where he wowed Prime Minister Margaret Thatcher (719) while his wife snapped up a \$1,780 pair of earrings in Harrod's with her American Express credit card. After ceding power, Gorbachev toured America in *Forbes* magazine's corporate jetliner, *Capitalist Tool*. **15,589**

238 GIANLORENZO BERNINI (1598-1680) *Rome's decorator*

While many of us must be content to lie peacefully beneath a two-by-four-foot gravestone, all of Rome is a monument to Bernini. A full three centuries after his death, his genius lives on in fountains, churches, statues, altars, piazzas, and other people's tombs. Although the quick-tempered Bernini was born in Naples, he lived, worked, and thrived in Rome. Pope Paul V, seeing the child Bernini's copies of the great sculptures of antiquity, declared he was destined to be "the Michelangelo of his age." And like that great master before him, Bernini spent his career doing the artistic and architectural bidding of cardinals and popes. He was so busy that he was forced to hire just about all the stone carvers in and around Rome to complete his commissions. When in Rome, do as the Romans do: sit in a café at the Piazza Navona and admire Bernini's fountains. **15,581**

239 BARTHOLOMÉ DE LAS CASAS (1474-1566) *conscience of a new continent*

The conquerors of the West Indies killed the

conquered without scruple. The natives weren't considered human until Pope Paul III decreed it thirty-nine years after Columbus's discovery. Las Casas was a planter-turned-priest who witnessed massacres in Cuba and Hispaniola and cried out in anguish untypical of his times. When humanist Juan Ginés de Sepúlveda declared it was no crime to kill heathens, Las Casas replied, "All the peoples of the world are men, and the definition of men, collectively and severally, is one: that they are rational beings." His lobbying led to a law abolishing Indian slavery, though when he tried to enforce it as bishop of Chiapas in Guatemala, Las Casas was forced to return to Spain. Eventually the law prevailed, and Las Casas is remembered as an early champion of social justice. **15,524**

240 LUCRETIA MOTT (1793-1880) *first voice of American women*

Mott was the first woman to speak up for women's right to speak out. This was ignited after abolitionists refused to let her participate at an international conference. Her militancy began years earlier after she discovered male colleagues at her school were earning double her salary. In 1848 she teamed with Elizabeth Cady Stanton (86) to launch the organized women's rights movement in the United States. Mott and her husband James shared a rare marriage of equals. Both Quakers, they were staunch abolitionists who hid escaped slaves in their home. Mott always had the angels on her side. At one antislavery meeting thugs were attacking speakers outside. Mott told her male escort to assist other ladies who were alone and fearful. Then she turned to a mean-looking hoodlum, placed her hand on his arm, and said, "He will see me safely through." Thunderstruck, the heavy did as Mott instructed. **15,473**

241 JOHN III SOBIESKI (1629-1696) *Polish king and legendary savior of Christian Europe*

In one of the decisive battles of European history, Sobieski broke the Turkish siege of Vienna in 1683, turning back the Turkish "menace." Earlier he had displayed his military genius by defeating the Tatars four times in eleven days in a raid on Ukraine. To be sure, the Polish warrior had warts. A French artist sketched him being heaved by his men up the battlements of a conquered city because he was too fat to climb them. And before he became king, he switched sides twice in a war between Poland and Sweden. Why he wasn't executed for treason, we'll never know. Moreover, it seems, the terror of the Turks was also a hen-pecked husband, "the obsequious slave" of his beautiful French wife. His greatest failure was posthumous; within years of his death, independent Poland ceased to exist. **15,468**

242 ITO HIROBUMI (1841-1909) *modernizer of Japan*

Educated in a pro-Imperialist school and made samurai by age twenty-two, Ito was sent on a mission to Europe. In England, when he saw the technology of the Industrial Revolution, he shed his anti-West prejudices and became an advocate of opening Japan to foreign influences. After putting down rebellions by samurai and divisions within the government, Ito drafted a constitution that insured the continuity of the imperial line. As prime minister from 1889 to 1901, he presided over Japan's industrialization. Then he served as resident general of Korea, an unwilling Japanese protectorate. A man of unusual sensitivities for a politician—he wrote Chinese poetry under the pen name Spring Field—Ito was assassinated by a Korean nationalist. **15,421**

243 IVAN THE TERRIBLE (1530-1584) *first Russian czar*

He expanded the empire started by his grandfather, Ivan the Great, made Moscow the capital, and created the basis of Russian absolutism that endured into the late twentieth century. But he is most remembered for his reign of terror against the Russian nobility. Even as a boy, he savored brutality; a favorite game was tossing dogs from the Kremlin's two-hundred-foot walls. As ruler, he was prone to bizarre political moves, like his creation of an autocratic state-within-the-state, and his false abdication. "The czar's nocturnal birdsong / was the screams of folk in towers and in dungeons," Russian poet Yevgeny Yevtushenko later wrote. Ivan once kissed a foe's infant child, then slit its throat. He killed his son Ivan during a quarrel, striking him in the temple with the iron-pointed staff he carried everywhere. Years later, as Ivan lay dying, he beseeched God's forgiveness. Tolstoy (34) imagined him confessing: "I allowed the devil to rule my deathless soul." **15,410**

244 IVAN PAVLOV (1849-1936) *dogged researcher*

Next to the legend of Galileo (4) dropping balls from the leaning tower of Pisa to learn about gravity, our favorite research story is about Pavlov's dogs. Pavlov proved that pooches who are repeatedly given meat after a bell rings will eventually start salivating when the bell sounds, even if no meat is in sight. These experiments on what Pavlov called "conditioned responses" spread the idea that social behavior can be altered by scientific controls. Behaviorist B. F. Skinner (121) lapped up the theory. Given the Soviet government's mechanistic views, no wonder the Kremlin watchdogs never muzzled Pavlov's research. His father was a country priest; Pavlov was trained in a seminary, but he was

drawn to physiological studies from an early age. He was in his fifties when he embarked on his dog experiments, and he won the Nobel Prize for medicine and physiology in 1904. **15,399**

245 ANNA PAVLOVA (1881–1931) *prima ballerina*

The inspiration for ballet-master Michel Fokine's 1905 *The Dying Swan* came from the flowing style of unorthodox dancer Isadora Duncan (554). But Fokine had Pavlova in mind when he choreographed it. Her perfect execution of classical ballet techniques to evoke emotion in an audience made her the greatest ballerina of her time, maybe all time. Her interpretation of the swan's feeble last attempts at life, for example, is ballet history's most famous solo performance by a woman. The St. Petersburg-born dancer learned her craft at Russia's Imperial Ballet Academy. She began appearing abroad in 1907, and in twenty-three years of almost nonstop touring, she was the number-one missionary for the art of classical dance, prompting a famous successor, Allegra Kent, to call her a balletic combination of Ferdinand Magellan (42) and the missionary Junípero Serra. Her grace and intensity are evident even today; the miracle of film captured Pavlova dancing at the height of her career. **15,361**

246 ROBERT FULTON (1765–1815) *launcher of the first viable steamboat*

Others produced prototype steamboats, but Fulton made the dream work. He tested his first steamboat in the Seine, then offered the ship to the French. But Napoleon (16), who had rejected Fulton's newfangled submarine as dishonorable warfare, said *non* again. "A charming man and brilliant conversationalist," said French minister Talleyrand (419) about Fulton, "but I'm afraid the poor fellow's cracked." When the British turned him

down, too, a frustrated Fulton returned to America. With partner Robert Livingston, he launched a steamboat run on the Hudson River between New York and Albany in 1807. The 150-foot steamship, with huge paddlewheels on each side, was named the *Clermont*, but the jeering public called it "Fulton's Folly." Nobody laughed long; the boat cut the trip from four days to thirty-two hours. Fulton's commercial success knocked tows, barges, and horse ferries right out of the water. Another giant step in the evolution of transportation. **15,360**

247 GEORGES DANTON (1759–1794) *the Great Compromiser of the French Revolution*

Instrumental in ridding France of the monarchy and creating and defending the French Republic, Danton moderated Robespierre's (68) excesses before falling victim to the Terror. A ditty in the 1792 legislative election urged: "Only vote for such men / As Danton and then / We'll be happy forever, / Forever, Amen." But happiness eluded France as the bourgeois revolt against king and clergy degenerated into a bloodbath. Danton's efforts to forge compromises among political factions and save the innocent from the gallows proved futile. At the foot of the scaffold, he cried out: "O my wife, my well beloved, I shall never see thee more!" Then he rebuked himself: "Danton! No weakness!" Finally he asked the executioner to show his decapitated head to the people. "So passes," wrote Thomas Carlyle (691), the nineteenth-century British historian, "like a gigantic mass, of valour, ostentation, fury, affection and wild revolutionary force and manhood, this Danton." **15,343**

248 JOHN DALTON (1766–1844) *physicist who laid the foundation for atomic theory*

Dalton's Quaker clothing sometimes drew atten-

tion, but behind his facade lurked a keen scientific mind. The son of a weaver, Dalton showed such academic ability that by age twelve he was running the school he had attended in an English village. Barred from Oxford and Cambridge because he was a Quaker, Dalton was largely self-taught. He formulated the theories that matter is made of atoms, that different elements have different atoms, and that a reaction is a readjustment of atoms. He didn't get everything right—for example, his formula for water was one hydrogen atom too short—but he put scientific thinking on the right track. He spent a lifetime making observations, and by the time he died, he had accumulated more than 200,000 entries in his diary. **15,341**

249 **GRATIAN** (fl. 1140) author of the millennium's first great law book

He was a twelfth-century writer, probably Italian, and probably a monk. That is all any honest medievalist can claim to know about the life of Gratian. Whoever he was, Gratian had a profound influence on the law and on scholarship by writing *The Concord of Discordant Canons*, better known as the *Decretum*. Catholic Church laws handed down by tradition often disagreed with each other; the *Decretum* tried to reconcile the contradictions, making it the prototype of legal opinions and treatises that settle disputes over the meaning of laws and precedents. Like a lot of scholars of the law, Gratian was neither objective nor riveting. His chapter on sex, for example, was so boring, it gave us a headache, which Gratian may have intended, given his view that coition was sinful, even in marriage. **15,269**

250 **PAUL EHRLICH** (1854-1915) father of chemotherapy

Where Emil von Behring (220) and Shibasaburo

Kitasato left off with their antitoxin work, Ehrlich began. As a student in Berlin, Ehrlich shone in subjects he loved and faltered in those he disdained. Fortunately for us, this cigar-puffing, moody genius adored science. He invented a new staining technique on slides for the tuberculosis bacterium—a development of major importance for diagnosing TB and one that is still used. Behring came to use Ehrlich's pathfinding research in standardizing diphtheria serum. But the two clashed when Ehrlich decided serum therapy couldn't conquer the many infectious diseases not triggered by bacteria. Ehrlich's experiments with drugs to kill or stem the growth of these diseases marked the start of chemotherapy. When his arsenic compound proved effective against the organism that causes syphilis, nations took notice. At his death, the London *Times* praised Ehrlich's many achievements, saying, "The whole world is in his debt." **15,244**

251 **BARUCH SPINOZA** (1632-1677) religious rationalist

One critic said his philosophy "devoured thought." It is hard to get emotional about his observation that "emotion towards a thing contingent, which we know not to exist in the present, is fainter than an emotion towards a thing past." But his influence on the modern world view is overwhelming; thinkers from Kant (49) through Freud (15) adopted his habit of picking everything apart. This secularist son of refugees went about Amsterdam trying to persuade his fellow Jews that the Talmud was not binding on them. The shocked Jewish leaders excommunicated him. His religious rationalism was his revenge. Einstein (17) called his ideas "heroic illusions." And the playwright Dimitri Frenkel Frank imagined a conversation in which the artist Rembrandt (46) confides he has gone

bankrupt. "Is that all?" Spinoza asks disparagingly. "It's better to think." Rembrandt replies: "It's better to feel." **15,236**

252 CHARLOTTE PERKINS GILMAN

(1860–1935) *women's economic equalizer*

Gilman did not suffer foolish women gladly. She dubbed the twentieth century the "woman's century" and lamented that "the world waits while she powders her nose." Gilman described the mental breakdown she suffered after her child's birth in the now-celebrated short story "The Yellow Wallpaper." In that piece a new mother is driven mad by inactivity and the limitations placed on middle-class women. Gilman herself had been overwhelmed by a paralyzing postpartum depression that lifted only when she fled her husband and began writing. During a prolific career she published books, essays, short stories, poems, articles, and even her own magazine. In 1898 her *Women and Economics* asserted that until women became self-reliant and prepared themselves for careers, they would be economically disadvantaged. Society, she argued, would improve only when the lot of women was ameliorated. **15,204**

253 DMITRY MENDELEYEV (1834–1907)

classifying chemist

The ghost of Mendeleev hovers behind the huge periodic tables of the elements on the walls of chemistry classrooms. The Russian succeeded where other brains had failed, developing the first known relationship of the elements by classifying them according to atomic weight. His work, with later additions by German Julius Meyer, is known as the Periodic Law, a basic principle in chemistry. Savvy Dmitry even left space for elements he suspected were out there—somewhere. He was right; three more were dis-

covered within twenty years with the properties he predicted, and there were more to come. Chemistry was Mendeleev's forte. Politics was another story. In 1890 the progressive Professor Mendeleev sent the government a letter from students protesting unjust conditions at the university in St. Petersburg, where he was teaching. Not only did the oppressive czarist regime take great offense, but it put Mendeleev in a new category: retired. **15,191**

254 HONORÉ DE BALZAC (1799–1850)

chronicler of the human comedy

The French Realist writer helped mold the modern novel through use of sequenced events, realistic characters, and forceful language. He wrote to pay never-ending bills. For twenty years, Balzac clocked twelve- to eighteen-hour workdays writing ninety-five novels, numerous short stories, plays, and essays. He decided to compile the novels and stories into one massive work called *The Human Comedy*, which includes the novels *Le Pere Goriot*, *Eugenie Grandet*, and *La Cousine Bette*. Author W. Somerset Maugham said Balzac's "greatness lies not in a single work, but in the formidable mass of his production." Balzac's workaholicism matched an extravagant lifestyle of gambling, gluttony, and materialism. A memorable character himself, he created two-thousand others ranging from innkeepers, clerics, and journalists to bureaucrats, merchants, and prostitutes. They were so lifelike even Balzac believed in them. While dying, he called for his medical character: "Send for Biachon," he implored. "Biachon will save me." **15,167**

255 BERNARD OF CLAIRVAUX (1090–1153)

spiritual peacemaker

Burgundian nobleman Bernard de Fontaines sought a life of meditation and established a

Cistercian monastery at Clairvaux. Existence was austere, and Bernard soon developed anemia, migraines, gastritis, and hypertension. But his sufferings only strengthened his spirituality. Word soon spread of this mystic, ascetic, and saint, and the world summoned him from solitude. He mediated civil and church disputes, was confessor to five popes, and countered heretical teachings. God's grace that "had possession of this frail man burst into flame in the hearts of all who heard him speak," wrote Thomas Merton. Bernard's one mistake: championing the Second Crusade without envisioning its bloody outcome. Church fathers call him the "Mellifluous Doctor," for his teachings as sweet as honey. "The reason for loving God, is God," Bernard said. "The measure of this love is to love without measure." Bernard was canonized in 1174. **15,150**

256 **PIETER BRUEGEL THE ELDER** (c.1528-1569) *patriarch of Flemish painters*

Like father, like sons. Pieter the Younger and his brother Jan never quite equaled the eminence of their father. As a triumvirate, however, they gave the Flemish school of painting its luster. While other artists were immortalizing the Madonna, saints, and other heavenly bodies, Bruegel the Elder hobnobbed with peasants. In fact, his paintings could only have been painted in the Low Countries. Even today the gray skies there and the broad simple Flemish faces make Brussels look like an ad for a Bruegel exhibit. Bruegel deliberately rejected the Renaissance preoccupation with the ethereal and mystical in favor of earthy peasant life and realistic settings. One of our favorites, *The Census at Bethlehem*, portrays Joseph and a very pregnant Mary in a sixteenth-century Flemish winter scene. Bruegel also liked to arouse emotion: in his *Wedding*

Dance just about all the men are cavorting in various states of arousal. **15,147**

257 **FRANCIS DRAKE** (c.1540-1596) *Mr. Mission Impossible for Queen Elizabeth I*

Good morning, Mr. Drake. Your mission, if you choose to accept it, is to keep England independent by singeing the beards of Spaniards and taking their treasure. If you or any member of your force is caught or killed, the queen will disavow any knowledge of your actions. Drake was the best seafaring warrior in outgunned England's war against Spain. And though Queen Elizabeth (31) pretended he was an unauthorized brigand, she was able to repay her entire foreign debt with the wealth he captured from the Spanish during his three-year trip around the world in the *Golden Hind*. The booty was worth \$30 million in today's money. This red-haired fanatical Protestant and music lover—he brought an orchestra on his trips—died of fever on an expedition. When the Spanish heard, they danced in the streets. This entry will self-destruct in ten seconds. **15,145**

258 **DONATO BRAMANTE** (1444-1514) *beauteous builder*

How would you like to have St. Peter's Basilica in your portfolio? Bramante did, and a host of smaller but equally distinguished edifices. Pope Julius II (794) tapped him for chief architect of St. Peter's—quite an honor for this peasant's son. Bramante began his career by painting architectural fantasies—fake archways and columns—on murals. He graduated to building the structures themselves. In 1499 he went to Rome expecting to retire and study ancient buildings. Enter Julius and his commission to construct the world's largest church, where his own tomb would be enshrined. Work was still under way when Bramante died at

age seventy. He was buried in St. Peter's, one year after Julius. Bramante's body was borne there, said artist Giorgio Vasari, "by the papal court and by all the sculptors, architects and painters." **15,103**

259 CHRISTOPHER WREN (1632–1723) *awesome architect of London*

He never went to Italy to marvel at the craftsmen who preceded him, and he had no formal architectural training. Yet Wren became the most important architect in England, someone who envisioned London's churches and palaces that we ogle today. Educated in mathematics, Wren was consulted for his expertise in that area to help solve a building problem. Traveling to Paris, he watched with curiosity the construction of the Louvre. Back in England, his opportunity for great architectural accomplishments came about after the Great Fire ravaged London in 1666. Nearly all the city—including some eighty churches and the cathedral—was destroyed. Wren rebuilt London. Lacking the financial backing of the Catholic Church or benevolent royalty, his visions of architectural splendor were always toned down to accommodate financial realities—even St. Paul's Cathedral, the ultimate monument to his genius. **15,089**

260 AUGUSTE RODIN (1840–1917) *the thinking man's sculptor*

He was a perfectly fine sculptor who became one of the greatest by breaking from realism and turning to the romanticism that marks his best works. As the model for the breakthrough, *The Age of Bronze*, Rodin picked one of nine musclebound soldiers sent by an acquaintance in the Belgian army. His most famous works are *The Burghers of Calais*, *The Kiss*, *Balzac*, and of course, *The Thinker*—so familiar, it is a cliché. "Life flows like a river from his fingers," an admirer said, and

Rodin loved putting those fingers on beautiful models. "Your skin has the whiteness of a turbot that one sees lying on the marble slabs of your wonderful fishmongers," the Frenchman told English subject Mary Hunter. Dancer Isadora Duncan (554) lamented late in life that she kept her virginity at age twenty-two when sixty-year-old Rodin offered to take it. **15,031**

261 DANIEL FAHRENHEIT (1686–1736) *originator of the first widely used thermometer*

Of thirty-five temperature scales circulating in the early eighteenth century, Fahrenheit's mercury thermometer became the best known, and its proliferation helped scientists the world over compare temperatures in experiments. Fahrenheit put water's freezing point at 32 degrees and its boiling point at 212. He arrived at ideal human body temperature by sticking gauges in a healthy man's mouth or under his armpit. Fahrenheit thought he was patterning his scale after Dutch physicist Ole Romer's prototype. He got it wrong, but Fahrenheit's scale turned out to be more logical and practical. So much so that the United States has been loath to change to the more recently adopted Celsius scale. Until that happens, just figure $F = (9/5 \times C) + 32$. **15,004**

262 MAYER AMSCHEL ROTHSCHILD *(1744–1812) founder of the world's greatest banking dynasty*

From selling old coins in Frankfurt's Jewish ghetto, Rothschild graduated to money changing before becoming Prince William of Hesse-Hanau's financier. Setting up his five sons in the financial centers of Frankfurt, Paris, London, Vienna, and Naples, Rothschild hooked Europe's princes on low-cost credit discreetly advanced. In the Napoleonic Wars, he financed the duke of

Wellington's (278) military campaigns under the French dictator's nose. The Rothschilds cherished secrecy, from the false bottom of the family coach to the artificial language they invented. After the patriarch's death the sons spurred Europe's economy by investing in the Industrial Revolution. In 1849 their aging mother reassured a visitor, "There will be no war. My sons won't finance it." That power eluded them, but their empire still flourishes. **14,943**

263 SAMUEL ADAMS (1722-1803) *propagandist of the American Revolution*

We tell our journalism history students that Adams is the real father of public relations. More than a hundred years before P. T. Barnum (94) or Edward Bernays (747), Adams whipped up public sympathy for revolution. He wanted the American colonists to hate the British so much that they'd pick up their bayonets and fight. Adams and his "Sons of Liberty" buddies wrote scores of articles that set out logical arguments against British domination. The articles were penned in simple terms so that even the barely literate—the men who would be footsoldiers—could understand. Adams hung out in the offices of the *Boston Gazette* and used the newspaper to rally "patriots" against the British redcoats. When the British fired on a crowd in Boston, Adams dubbed it the "Boston Massacre." Rumor has it he was one of the Indians who invited the British to a tea party. **14,937**

264 LEONARDO OF PISA (c.1170-c.1240) *the Western world's math teacher*

Which problem is easier to solve? (a) XVI + CCCXII + IX = ? or (b) 16 + 312 + 9 = ? If you said (b) you are adept in the new math. New, that is, in 1202 when Leonardo, also known as Fibonacci, published the *Liber Abaci* or *The Book of Calcula-*

tion. It was a compilation of wisdom he had picked up as a merchant in Islamic territory, and though it was old stuff to the Arabs and Hindus, it was new to the West. Leonardo's widely circulated book put Roman numerals on the road to being useless, except to count world wars and Super Bowls. Leonardo taught how to add, subtract, multiply, and divide the Arabic numbers and in later works wrote about esoteric equations and trigonometry. For the record, the answer to the first problem is CCCXXXVII. Thanks to Leonardo, you can do the other one yourself. **14,898**

265 ANDERS CELSIUS (1701-1744) *developer of the centigrade temperature scale*

Astronomer Celsius spent years observing the aurora borealis, determining the size of stars, and confirming Newton's (6) theory that the earth pancakes at the poles. Only late in life did he dabble in temperature scales, but there he made his mark. In 1742 Celsius invented a centigrade scale, which was the first to allow for atmospheric pressure in its measurements. His "constant degrees," or fixed points, were zero, for where the mercury stood when the thermometer was plunged into boiling water at a particular barometric reading, and one hundred, when it was placed in melting snow. The scale was reversed by Sweden's Uppsala observatory in 1747 and became known as the Swedish thermometer. It wasn't until the 1800s that folks started tacking Celsius's name to it. Use of the centigrade thermometer has now spread throughout most of the world. **14,876**

266 FRANCIS JOSEPH OF AUSTRIA- HUNGARY (1830-1916) *last of the emperors*

He was a big old lumbering guy in mutton chops, presiding over the decline of a big old

slumbering state of multinational chaps. Francis Joseph issued the ultimatum to Serbia that led to World War I and the resultant horrors of fascism and Communism. Many of his family came to a sad end. His brother Maximilian, the would-be emperor of Mexico, was shot to death. His son, Crown Prince Rudolf, blew his mistress's and his own brains out. His wife Elizabeth was hacked to death by an anarchist. And it was the assassination of his great-nephew Francis Ferdinand that provoked Francis Joseph's ultimatum. Then the Habsburg dynasty that he had headed for sixty-eight years came crashing down. As historian A.J.P. Taylor wrote, "the crimes and errors of centuries were exacting their penalty." The emperor told Teddy Roosevelt (700) that he was "the last monarch of the old school." With his death it was time for history to say adieu to empires. 14,870

267 ANTOINETTE LOUISA BROWN BLACKWELL (1825–1921) *first ordained woman minister in the United States*

No matter that, about a century earlier, the old blowhard Samuel Johnson (182) said, "Sir, a woman preaching is like a dog's walking on his hind legs. It is not done well; but you are surprised to find it done at all." Blackwell, despite such Neanderthal attitudes, became an ordained Congregational minister in 1853. After a year at her parish in South Butler, New York, her liberal religious beliefs clashed with those in the traditional parish. Then she switched to the Unitarian Church. She married into the prominent reform family, the Blackwells, and gave birth to seven children. She helped establish a parish in Elizabeth, New Jersey, and occasionally preached at other free-thinking churches. Blackwell vocally supported suffrage and education for women.

She dabbled in poetry and also wrote books on religion and women's rights. Take that, Mr. Johnson! 14,861

268 JAMES MADISON (1751–1836) *father of the U.S. Constitution*

He called it "a system which we wish to last for ages," and it has. The Ten Commandments aside, there is no better set of written rules. Its provisions flowed in large part from Madison's erudition and ability to form compromises among the delegates to the 1787 Constitutional Convention in Philadelphia. Madison prepared for the drafting by studying a hundred books on government sent from France by ambassador Thomas Jefferson (64). (In return, Jefferson asked Madison to send him fruit trees and a possum.) Madison successfully preached ratification of the Constitution as coauthor of a persuasive series of newspaper articles that are known collectively as the *Federalist Papers*. Elected to the nation's highest office in 1808, the sixty-inch Madison was America's shortest president. But "Jemmy" and his ice-cream-making wife Dolley stood tall against the British in the War of 1812—except when redcoat raiders temporarily burned them out of the White House. 14,837

269 HENRI MATISSE (1869–1954) *French painter of bestial force*

Matisse said he became an artist because his mother gave him a set of paints while he was recuperating from appendicitis at age twenty. He led a group of pals who were influenced by the Tahitian paintings of Paul Gauguin (545), and when they exhibited their works at a Paris show in 1905, a critic dubbed them, the "wild beasts"—*fauves*, in French—for their bold colors and broad brushstrokes. His most famous painting is *The Dance*. Even before he became a trendsetter,

Matisse had graduated from outrageousness to marketability. His popularity was boosted when celebrity Gertrude Stein (725) and her brothers collected his works. Matisse and Pablo Picasso (149) had a famous friendship, but Picasso's hangers-on decided that Matisse was old hat, and they loved to throw lit cigarettes at his 1906 *Portrait of Marguerite*, hanging in Picasso's studio. **14,821**

270 DENIS DIDEROT (1713-1784) encyclopedia editor

One of the most original thinkers of his time, French philosopher Diderot's essays presaged Darwin's (7) ideas on natural selection and Braille's (956) reading system for the blind. But Diderot is best known as editor of the *Encyclopédie*, twenty-eight volumes of erudition printed in forty-three editions during a quarter-century. Though often flawed and biased, the *Encyclopédie* became the most important publication of the century, with contributions from Voltaire (36), Rousseau (19), Diderot, and other distinguished authors, mathematicians, and scientists. It had a profound influence on thought during Europe's Age of Enlightenment, preaching reason over religion and knowledge over dogma. Fueling Diderot's brilliance was his insatiable appetite for ideas. "I let my mind rove wantonly, give it free rein to follow any idea, wise or mad, that may come uppermost," he wrote. "I chase it as do young libertines on the track of a courtesan. My ideas are my trollops." **14,816**

271 MITSUI TAKATOSHI (1622-1694) Japanese business visionary

Starting off as a rice merchant and money changer, Mitsui branched out into dry-goods stores and expanded rapidly by applying two principles: Keep your prices low and your workers happy. Sounds obvious? Even in the

twentieth century a lot of companies have forgotten those rules. In the seventeenth century they were revolutionary ideas. Mitsui kept his prices low by maintaining razor-thin profit margins. And he kept his workers happy by giving them bonuses (an early form of "worker empowerment"). Scan any directory of corporate Japan today to see Mitsui's legacy, a conglomerate that spans every conceivable industry: Mitsui & Co., Mitsui Bank Ltd., Mitsui Construction Co., Mitsui Engineering and Shipbuilding Co., Mitsui Mining & Smelting Co., Mitsui Mining Co., Mitsui OSK Lines Ltd., Mitsui Petrochemical Industries Ltd., Mitsui Real Estate Development Co., Mitsui Sugar Co., Mitsui Toatsu Chemicals Co., Mitsui Trust & Banking Co., and Mitsui Warehouse Co. **14,804**

272 & 273 JACOB (1785-1863) and WILHELM (1786-1859) GRIMM publishers of children's fairy tales

Once upon a time there were two brothers who were inseparable. They went to school together, and when their father died and the family lost all its money, they found a way, through the kindness of others, to attend graduate school. Together they studied ancient German literature and folklore. When Wilhelm married the daughter of a druggist, the three of them lived as a family, and she dutifully cared for the domestic needs of the two brothers. They wrote down the tales of storytellers throughout the region and published 156 stories in two volumes. The stories reinforced nineteenth-century morality and upheld the Protestant ethic. Goodness always prevailed. Even today, despite criticism from feminists and parents who think the tales are a little too grim, children are enthralled by the plight of Little Red Riding

Hood, Cinderella, Rapunzel, Snow White, and dozens of other fairy princesses and damsels in distress. One day a wicked king took over their part of Germany, and the brothers Grimm were ordered to sign an oath of allegiance to him. When they refused, the penniless Grimms were cast out of their jobs. Then the kind king of Prussia invited the brothers to Berlin, gave them jobs at the university there, and they lived happily ever after. The End.

FOR EACH: 14,801

274 CLAUDE DEBUSSY (1862–1918) liberator of music from harmony

We date the beginning of modern music to December 22, 1894, when a Paris audience heard a flutist play the opening passage at the premiere of Debussy's *Prelude to the Afternoon of a Faun*. In an instant music was freed from the conventional harmonic rules that had reigned for almost three centuries, and out rushed the color and improvisatory feeling associated with modern music. "I want to sing my interior landscape with the simple artlessness of a child," Debussy wrote. He was shy like a child, but he loved whiskey and food, could roll a perfect cigarette without licking the paper, and was an uncompromising craftsman; he delayed publication of one piece for months while he fiddled with four measures. He loved France and hated most things Germanic, including the music of Mozart (52) and Wagner (165). "They had spoiled a lot of paper," he said. 14,741

275 GOTTLIEB DAIMLER (1834–1900) inventor of the gas guzzler

The development of the automobile was stalled because the existing steam engine was slow and so heavy that it weighed down the horseless carriage. But Daimler, who worked initially in engineer Nikolaus Otto's (105) factory, literally fueled the budding automobile industry with his inven-

tion—a high-speed, gasoline-powered, internal combustion engine. Just one cog in the big wheel that was to become the automobile industry, Daimler's invention solved the biggest problem in developing a practical car. The Daimler engine later powered boats and airplanes, but its first success was in November 1885 on a motorcycle—the world's first—that Daimler drove in his garden. By the turn of the century, the German Daimler was marketing a "Mercedes" automobile to French buyers who sought the latest expensive toy. It took Henry Ford (51) and his innovative ideas to finally mass-produce these novelties. 14,738

276 JOHN OF AUSTRIA (1545–1578) defender of Christendom

John won the naval battle of Lepanto over the Turks in 1571, ending the Ottoman threat to Christian Europe in the Mediterranean. He had other adventures, attacking pirates off North Africa and scheming to invade England and wed the imprisoned Scottish queen, Mary Stuart (610). But it was his annihilation of the Turkish fleet that turned the tide of history and inspired paintings by Titian, Tintoretto, and Paolo Veronese. On one of the Holy League's two hundred ships, legend has it, a wooden statue of Christ twisted to one side to avoid a Turkish cannonball; the statue survives in a Barcelona cathedral. On another, the left arm of the future Spanish novelist Cervantes (44) was wounded, though his right emerged unscathed to pen *Don Quixote* years later. The Turkish sultan shrugged off the debacle; having just conquered Cyprus, he declared, "They have cut off my beard; I have cut off their arm." 14,731

277 WILHELM CONRAD RÖNTGEN (1845–1923) the X-man

In November 1895 the German physicist was experimenting in his office with cathode rays

when he witnessed an eerie fluorescence. He abandoned his line of research and became absorbed in examining this phenomenon. After discovering the rays' ability to penetrate matter, he brought his wife to the laboratory and photographed her hand using them. The result was an image of her bones. When his research was made public in January 1896, illustrated with a similar X-ray of a human skeleton hand, the excitement in the scientific community and the public at large was huge. Röntgen presented his findings to the kaiser himself. The rays' diagnostic qualities were put to use almost immediately. While in Germany they're called *Röntgenstrahlen* after the inventor, the rest of us use the term the discoverer himself coined, "X-rays."

14,708

278 DUKE OF WELLINGTON (1769-1852) *Waterloo wunderkind*

Without this blue-eyed British dandy's military genius, the world might be ruled today by Napoleon VII. But on a field near Brussels in 1815, the Iron Duke shattered Napoleon I's (16) last-ditch bid for power. His soldiers called him "Old Nosey"; one private told him, "God bless your crooked nose; I would rather see it than ten thousand men." Wellington (born Arthur Wellesley) later became a political reactionary and father figure to Queen Victoria (91), but Waterloo—a synonym for utter defeat—remains his legacy. Alas, the prayer said in British churches after he crushed the French dictator went unfulfilled: "Grant that the result of this mighty battle may put an end to the miseries of Europe." Wellington was as successful in love as in war. Retorting to Lady Shelley's boast that she had resisted his advances, he wrote his niece: "In my own justification, I was never aware of this resistance."

14,695

279 EDGAR ALLAN POE (1809-1849) *master of the macabre*

A giant of American literature, Poe wrote short-story masterpieces of supernatural horror like "The Fall of the House of Usher," and produced haunting poetry, most famously "The Raven," with its half-mad student's cries for consolation and the ill-omened raven's repeated reply of "Nevermore." Poe invented the detective story and was an important literary critic. His influence on future American and European writers, and on modern literary theory, is huge. But his life was as tortured as his fiction. A gambler, boozier, and opium user, Poe got kicked out of West Point, legend has it, for showing up naked for a parade. He married his thirteen-year-old cousin and, after her death at twenty-four, went downhill fast. "I became insane, with moments of horrible sanity," he wrote his mother-in-law. He was found dead on a Baltimore street. His funeral drew four mourners.

14,685

280 JOHN DONNE (1572-1631) *God's poet*

Born Catholic, Donne converted to Anglicanism, took his orders, and rose to dean of St. Paul's Cathedral. Years before, he had written love poems marked by cynicism, sensuality, and realism. His later religious poetry dealt with death and the soul's union with God, earning him the reputation as the greatest metaphysical poet. Donne was nearly undone by his secret marriage to Anne More. When her wealthy father heard about it, he had Donne imprisoned and stripped of his job. Eventually the marriage was ruled valid. Donne remained devoted to Anne and was grief-stricken when she died in 1617 after their twelfth child was stillborn. Her death only intensified his religious convictions. Donne, the preacher, could rivet his congrega-

tion. Consider this, from which more than one writer has borrowed: "No man is an island, entire of himself . . . any man's death diminishes me, because I am involved in mankind; and therefore never send to know for whom the bell tolls; it tolls for thee." **14,680**

281 **PETER PAUL RUBENS** (1577-1640) *the Rubens in Rubenesque*

He should be every woman's hero. In an age of anorexia, waifs, and diet pills, we are comforted by Rubens's taste in women. He celebrated cellulite, fantasized about fat, and paid homage to heavy hips. If Rubens were the arbiter of today's popular culture, most women would be goddesses. We would have ranked Rubens higher for the sheer beauty of his work, except it's hard to know which canvases are real Rubenses and which are from his "paint factory." He had so much influence in the art world that he had dozens of students and professionals working for him to fulfill all his commissions. He drummed up projects for himself when he served as a part-time Netherlands diplomat in Spain and England. He also was the Calvin Klein of the baroque world, affixing his name to tapestry designs, book title pages, engravings, and all sorts of decorative pieces. **14,671**

282 **EDWARD COKE** (1552-1634) *uncommon common lawyer*

In his decisions and commentaries, Justice Coke taught jurisprudence to generations of Englishmen, and he was an early leader of the fight to make common law superior to kings' power. These were lofty achievements for a money-grubbing know-it-all who was jealous of other office seekers, notably philosopher-lawyer Francis Bacon (84). The humbly born Coke made his fortune by marrying an heiress worth thirty thousand pounds sterling and got to be attorney

general in 1594 by fawning on Lord Burghley, Queen Elizabeth's (31) chief counselor. A. L. Rowse, the chronicler of Elizabethan history, wrote of Coke: "It was through this unpleasant man, selfish, and opinionated, greedy of power and money, rasping and grasping, pedantic and shrewish, for all his good looks crabbed and inasthetic (he loathed poets), that English liberties were upheld and defended." **14,644**

283 **EL GRECO** (1541-1614) *painter of religious ecstasy*

Born Doménikos Theotokópoulos on Crete, he soaked up Titian's teachings in Venice, where they called him El Greco, "the Greek." When King Philip II (427) needed artists to create altarpieces for a major new monastery, El Greco packed his bags, moved to Spain, and never left. Some place his portraits on a pedestal with Rembrandt's (46). Consider the triumphant majesty of his masterpiece, *The Burial of the Conte de Orgaz*. Among his great works: *Baptism*, *Crucifixion*, and *Resurrection*. He painted figures stretched to superhuman lengths, with bold colors and emotional intensity. El Greco never lacked for confidence. He once dismissed Michelangelo (13) as "a good man but he couldn't paint." A prolific artist, El Greco was equally creative in launching lawsuits to collect his fees. Artists for ages can thank him for championing their rights against the finicky demands of philistine patrons. **14,632**

284 **LEO HENDRIK BAEKELAND** (1863-1944) *plastic man*

Love him or hate him, he's the guy who gave the world the most durable, ubiquitous, useful, and maddening material since clay. Maybe it was because he grew up in perpetually overcast Belgium and craved a better raincoat, but after he emigrated to the United States in 1889 and

sold his Velox photographic-paper invention to George Eastman for \$1 million, Baekeland set out to find a synthetic substitute for shellac. In 1909 he combined phenol with formaldehyde to produce Bakelite, the first totally synthetic plastic and the first that didn't soften in heat. Today plastic is used in everything from life-saving medical devices to the shopping bags that waft across our parks. The man in the movie *The Graduate* was alluding to career options when he uttered one of cinema's most memorable one-word lines to Dustin Hoffman, but he might have been predicting the fate of the human race: "Plastics!" Thanks, Leo. **14,587**

285 **NORMAN BORLAUG** (b. 1914) *savior of one billion lives*

Borlaug sparked the Green Revolution, which tripled world grain output in the second half of the twentieth century, feeding a booming population and saving vast tracts of pristine forest from slash-and-burn farmers. It all started with the high-yield dwarf wheat he developed in Mexico and took to Pakistan and India in the mid-1960s to avert famine there. In 1984 former President Jimmy Carter and Japanese industrialist Ryoichi Sasakawa talked Borlaug out of retirement to help them take the Green Revolution to Africa. "I'm seventy-one; I'm too old to start again," the Iowa-born agronomist said. Retorted Sasakawa: "I'm fifteen years older, so I guess we should have started yesterday." Borlaug went to Africa, saw the poverty and hunger, and said, "Let's just start growing." He continued working on projects there well into his eighties. **14,582**

286 **IGNAZ PHILLIPP SEMMELWEIS** (1818-1865) *medicine's Mr. Clean*

Before Lister (122), before Pasteur (26), there was Semmelweis. He unraveled the mystery of why

women died from childbed fever. The disease, with the medical name "puerperal fever," had plagued maternity wards. Mortality rates were astronomically higher among women who had been attended by physicians rather than midwives. Semmelweis deduced that the only difference between the groups was that midwives were barred from performing autopsies of dead women. Horrors! Doctors went from the morgue to the delivery room without cleaning up! Simple solution: *Wash your hands!* Semmelweis required doctors to use a strong lime solution on their hands before delivering babies. The result was near miraculous—mortality rates dropped from 18 percent to 1.27 percent. Nonetheless, Semmelweis's ideas were never accepted until Lister reinforced them, a sorry fate for Semmelweis, who died of a raging infection after cutting his hand during an autopsy. **14,571**

287 **JOHN MARSHALL** (1755-1835) *most important American jurist*

When death stilled Marshall's brilliant legal mind, the Liberty Bell tolled in mourning. It cracked. Coincidence, maybe; eerily apropos, absolutely. As chief justice, Marshall raised the Supreme Court to an equal third branch of government. When Marshall was appointed by President John Adams (214), the high court's responsibilities were murky. In the landmark *Marbury v. Madison* decision of 1803, the Supreme Court overturned an act of Congress because it was unconstitutional, thus establishing the right of courts to review laws. Marshall, born in a log cabin in Virginia, the eldest of fifteen children, had turned down President Washington's (22) request that he serve as first attorney general. A loyal Federalist, Marshall clashed with presidents during his thirty-four years as chief justice. Most memorably, he incurred Jefferson's (64) wrath when he presided

at the treason trial of Jefferson archrival Aaron Burr. Burr was found innocent. **14,562**

288 LEOPOLD VON RANKE (1795–1886) founder of modern historical method

"My object is simply to find out how things actually occurred," he wrote, a novel goal at a time when antiquarians glossed over truths that clashed with their philosophies. All good historians since then have followed his precept. He used his friendship with Austria's powerful Prince Metternich (179) to gain access to official archives throughout Europe and wrote sixty books packed with what he had learned. Early twentieth-century critics suggested, unfairly, that Ranke was a boring historiographical version of Sergeant Joe Friday, the TV detective who wanted "the facts, ma'am, just the facts." Yet in classics such as *History of the Popes* and *German History in the Time of the Reformation*, Ranke touched on broad themes, not just dates and events. Call it optimism orchutzpah, he started his *Universal History* when he was eighty-six years old and had covered events through the fifteenth century when he died. **14,543**

289 CLARA BARTON (1821–1912) whirlwind disaster-relief organizer

Barton was called the "Angel of the Battlefield" for her courage and compassion in helping victims of the Civil War, the Franco-Prussian War, and the Spanish-American War. She was the driving force who brought the United States into the International Red Cross in 1881. More important, Barton convinced the International Red Cross to provide relief not just during war but after natural disasters. Privately, this schoolteacher-turned-rescue worker was one of the walking wounded. Emotionally crippled in childhood, Barton waged

a lifelong battle against depression. She couldn't stomach criticism and was an imperious boss. All her life she was a formidable presence. In old age she once heard noises in her house at night. She crept downstairs in her nightgown and nightcap, armed with a toy pistol. She discovered a burglar, threw him out, and then returned to bed, tucking the toy pistol under her pillow. **14,519**

290 SUN YAT-SEN (1866–1925) leader of the Chinese nationalist revolution that overthrew the 250-year Manchu dynasty

A poor farmer's son, Sun was influenced by Western ideas and baptized by an American missionary at age nineteen. He abandoned a medical career to embroil himself in Chinese politics. He wasn't very good at it, failing in all ten attempts at fomenting revolt. But his cause prevailed, aided by financial support he drummed up in Europe, Japan, and the United States, and he became the first leader of the Chinese Republic, proclaimed in 1911. Still, he didn't let affairs of state overwhelm him. In his late forties, married and the father of three, he took a second wife, the daughter of a Bible salesman. After he died, everybody from the Kuomintang he once ran to the Chinese Communist Party, and even the Japanese occupiers of World War II, claimed his mantle. **14,493**

291 JOHANNES FIBIGER (1867–1928) pioneer cancer researcher

If you asked Fibiger, he would have said his work to eradicate diphtheria earned him a place in our book. Wrong! It was good stuff, but Fibiger makes the grade as the man who made cancer a scientific research priority. Before him, cancer was such an unknown that the medical world was afraid to fiddle with it. This Danish physician who had developed a serum against diphtheria pursued an

educated hunch that chemicals and environmental factors could trigger cancer. He trapped more than a thousand wild rats and used a toxin to induce tumors in their stomachs. Today we know that his research lacked scientific controls and that he jumped to unproven conclusions. But that's immaterial. Fibiger's research and Nobel Prize in 1926 signaled to researchers that cancer was an important unexplored field. We've begun to tame cancer today because he dared to study it at all. **14,477**

292 WILLIAM BLACKSTONE (1723-1780) teacher of the law

In 1768, when he fought to keep a troublemaker named John Wilkes from taking a seat in the House of Commons, Blackstone the politician was trumped by Blackstone the scholar. Wilkes's claim was supported by Blackstone's own four-volume *Commentaries on the Laws of England*, and that settled the argument for the parliamentarians. The commentaries were history's most influential one-man synthesis of the inchoate corpus of common law. One of his admiring students at Oxford was young John Adams (214), the U.S. president-to-be. Abraham Lincoln (32) wrote of his first encounter with Blackstone's books at age twenty-six, "Never in my whole life was my mind so thoroughly absorbed." The bad side of Blackstone was his knee-jerk traditionalism; to liberal philosopher Jeremy Bentham (383), Blackstone was a reactionary boob who failed to understand that the law evolves. His poetry was bad, too. A sample couplet: "There in a winding, close retreat / Is Justice doom'd to fix her seat." **14,444**

293 JAMES NAISMITH (1861-1939) inventor of basketball

What has ten legs, rises nearly thirty-five feet, and clears big bucks in product endorsements? Your average pro basketball team. Naismith

developed the game these swift giants play, but he couldn't have dreamed it would reach such heights. In 1891 Naismith was a gym teacher in Springfield, Massachusetts, under orders from the department head to create a fun yet safe game for students to play indoors during snowy winters. He rose to the challenge, mixing elements of soccer, football, field hockey, and other outdoor sports. The result: basketball, pretty much as we know it today—only then, you had to dunk a soccer ball in a peach basket. **14,419**

294 JEAN-BAPTISTE COLBERT (1619-1683) architect of French economic grandeur

Finance minister and navy chief under Louis XIV (63), Colbert pushed France into the industrial age and made it Europe's dominant power. A ferocious worker, he instituted administrative and tax reforms, subsidized domestic industry, and built roads and canals. So bent was he on the nation's economic revival that he complained that too many promising young men were taking holy orders instead of going into business. Colbert started the company St. Gobain—still going strong—to produce mirrors so his compatriots wouldn't waste their money on Italian imports. In 1670 he ordered the planting of acorns in central France to provide timber for the navy for the next two hundred years. Three centuries later the hundred-foot-tall oaks of the forest of Tronçais stand as a tribute to his farsightedness. **14,412**

295 MI FEI (1051-1107) premier Chinese artist

Chinese artists ignored perspective, preferred watercolors to oil paints, never learned to draw the human body, and relied heavily on cultural symbolism, which is lost to the untrained eye. Mi Fei was no exception. He was a Chinese

bureaucrat whose big mouth annoyed his bosses so much that he was bounced from department to department. For relaxation he painted sparse landscapes—a few mountains in the background, some pine trees in the foreground, and a simple hut at eye level—in a century when Chinese artists crammed as much as they could into pictures. Although he fell into disfavor with the ruling emperor, centuries of artists vindicated him by copying his style, the highest compliment the Chinese bestow on an old master. **14,397**

296 FRANZ JOSEPH HAYDN (1732–1809) symphony stylist

Austria, 1809: Napoleon's (16) advancing armies occupied Vienna, home to famed composer Haydn. Even the emperor was awed by the musical genius who had composed 104 symphonies, establishing the symphony's basic form. "Papa Haydn" also crafted choral works, including *The Creation*, and more than eighty string quartets and fifty sonatas. As the great man lay dying, Napoleon ordered an honor guard stationed outside. Seventy years earlier, Haydn had arrived in the city as a peasant boy to sing in the choir. He'd gotten excellent musical training—until his voice changed. Eventually he became music director for Prince Esterházy and spent twenty-five years in his employ. Haydn adored Vienna but welcomed the writing respite of summers in the countryside with the prince's entourage. "There was no one to confuse and torment me," he explained, "and so I was obliged to become original." **14,358**

297 JOHN KEATS (1795–1821) British romantic poet

From his blazing but too brief life, Keats bequeathed us a wealth of poems rich in imagery, melody and exquisite language. A sample, from his long poem *Endymion*:

*A thing of beauty is a joy for ever:
Its loveliness increases; it will never
Pass into nothingness; but still will keep
A bower quiet for us, and a sleep
Full of sweet dreams, and health, and quiet breathing.*

Tuberculosis killed Keats's mother and younger brother and claimed Keats, too. He died in agony in Rome, where he had gone to seek a cure. Thanks to Lord Byron (385), the belief arose that Keats's death was hastened by scathing reviews of *Endymion*. Not really. Keats had weathered the lashings of sniveling critics with calm resolve. He once wrote, "I think I shall be among the English Poets after my death." He was right. **14,353**

298 JOHN II OF PORTUGAL (1455–1495) early imperialist

King John is probably best remembered as the man who turned Columbus (2) down eight years before the navigator's 1492 voyage. He made up for that lapse, however, by sending expeditions down the coast of Western Africa to build forts and trade in gold, slaves, spices, and ivory. Obsessed with the European quest for Prester John, a mythical Christian potentate who reigned somewhere in "the Indies," he also sent exploratory voyages eastward. Prester John, who supposedly held banquets for thirty thousand knights at an enormous table made of emeralds, was viewed as Europe's natural ally against Islam. King John never found Prester John, but he did reach an agreement with Spain in 1494 to divide up the New World. At home he was known as the "Perfect Prince" for beheading a couple of dukes to reassert royal power à la Machiavelli. **14,350**

299 GIAMBATTISTA VICO (1668–1744) first modern historian

Vico wrote and rewrote his ideas and then published them in a tome with a rambling twenty-

four-word title. We dug up a few clichés to express his ideas more succinctly: what goes around, comes around; history repeats itself; or as Yogi Berra put it so elegantly, it's déjà vu all over again. Vico fell off a ladder at age seven and injured his head so severely that doctors predicted he would die or be an idiot. Not so. After his recovery, he studied law. Vico's masterpiece (the short title is *The New Science*) described how man rises from bestial behavior, only to lapse again. His cyclical stages of history were the ages of gods, heroes, and finally men. Vico warned that despite the cycles of history, the changing nature of man prevents any kind of accurate prophecies. Oh well, *veni, vidi, vico*. **14,345**

300 **FRANZ LISZT** (1811-1886) *musical Don Juan*

He was a pale, sad-eyed, long-haired Hungarian-born French pianist whose dazzling public performances of works like his own *Liebestraum* helped make serious music an art form for mass consumption. And he invented the musical groupie. "It was impossible to count the ravishing celestial women who came to fall trembling, like poor little larks, at the feet of the terrible enchanter," a contemporary wrote. A teenage Russian lover spurned by the sixty-year-old Liszt was so distraught, she threatened to shoot him. Normally, though, he had long-term relationships like the ten-year affair with novelist Marie d'Agoult, who bore him three children. Their daughter, Cosima, married Richard Wagner (1813-1883), who was influenced by Liszt's orchestral styles in such pieces as *Les Preludes*. Today modern piano students learn techniques handed down by the pupils who flocked to the aging Liszt's studio. **14,308**

As we stacked up the movers and shakers of the millennium against one another, we could almost hear apoplectic readers rising in protest and screaming: "You're nuts!"

Take the next batch. How on earth, Elvis fans will moan, could we have rated those Liverpool mopheads ahead of the King? In truth, it was a close call. The first vote was 2-2, but then a Presley supporter weakened and the lone holdout conceded defeat. Our collective conclusion: Both the British crooners and the American hip-swiveler exerted enormous influence on popular music and popular culture, but the Beatles wrote most of their own music and sold more records.

Even so, one of us still believes that decision is all wet. And all of us bridle at some of the choices forced upon us by the other three. So we can imagine how much grumbling our rankings will provoke in readers. Scan the next thirty-odd pages, and you'll no doubt make your own list of dopey verdicts. Here is a sampling of seeming incongruities, and our reasons for them.

- What?!? Barthélemy Thimonnier, inventor of the sewing machine, gets more points than Samuel Morse, father of the telegraph? Yes, because Morse was but one of many minds who contributed to the evolution of the telegraph—he hit upon the idea while listening to an account of another scientist's experiments—whereas Thimonnier, a simple Parisian tailor, made his breakthrough pretty much on his own.

- What?!? Horace Mann—what did he do again?—trounces Babe Ruth, the greatest athlete in the history of the universe? Is that possible? Yes, because while Ruth scores high on charisma, Mann's championing of public schools makes his influence on American society incalculable.

- What?!? Two more popes? Do we really need all these popes? Yes. John XXIII turned the Catholic world on its head with his modernization program, while Gregory VII was a beacon of reform in the medieval church.

We can reason all we want; nobody is going to agree with us 100 percent of the time. And so we make this bold and unequivocal declaration: We stand by every one of our choices, except the really dumb ones. And you know which ones those are.

301 ÉDOUARD MANET (1832–1883) *rebel with a palette*

Frenchman Manet painted light-filled gardens, sunny seascapes, and alluring women. His groundbreaking style, using contemporary subjects and working in broad flat splashes of color, encouraged the Impressionists to break conventions, too. But it was his daring nudes that electrified the public and generated widespread scorn. Consider the large canvas, *Luncheon on the Grass*, and its naked female models picnicking in the woods with two clothed male artists. Or *Olympia*, the cream-skinned whore lounging on a divan, her eyes coolly appraising. *Olympia* so inflamed people in 1865 that it had to be hung high to avoid umbrella attacks. "Insults rain down on me like hailstones," Manet moaned to poet-friend Baudelaire (633). Only after his death, in a memorial exhibition in Paris, did sentiments soften. In 1907 then-Prime Minister Clemenceau (711) had *Olympia* brought down from her perch and transferred to the Louvre. **14,300**

302 FRANÇOIS RABELAIS (1483–1553) *French humanist and comic genius*

The defrocked monk jested that he wrote *Gargantua and Pantagruel*, his masterpiece about a giant and his son, "whilst I was eating and drinking." His opening line was, "Most noble and illustrious drinkers, and you thrice precious pockified blades." After denouncing the "sneaking jobbernot" who condemned Homer for spilling wine on his verses, Rabelais added, "A certain addle-headed coxcomb saith the same of my books, but a turd for him." Does that give you a flavor of his humor? Yet, saith French writer Anatole France, his real thirst was not for wine but to "drink knowledge; drink truth; drink love." The human comedy fascinated him. He poked fun at the pedagogic and parodied the

powerful. Czech writer Milan Kundera said that through Rabelais, "the art of the novel came into the world as the echo of God's laughter." The laughter echoes through Voltaire (36), Honoré de Balzac (254), Jonathan Swift (492), and Anthony Trollope. **14,281**

303 GIROLAMO SAVONAROLA (1452–1498) *fanatical reformer*

Some historians say the Dominican friar who was dictator of Florence for four years was a throw-back to the Dark Ages. We agree with others who say Savonarola was the prototypical modern politician who is swept to power on a wave of popular support and then becomes a power-mad dictator. Like some hectoring ayatollah, Savonarola preached so eloquently against the licentiousness of Florence's oligarchy that ruler Piero de' Medici was forced to flee and Savonarola took over. At first the people adored their priestly autocrat. When Savonarola built a pyre of decadent art, Sandro Botticelli (331) gladly contributed his own sensuous paintings to the flames. But the Florentines grew tired of Savonarola's bombast. So did Pope Alexander VI, a fun-loving man with six sons. When Savonarola warned the pontiff to prepare for a trip to hell, Alexander had his Florentine allies torture and burn Savonarola and throw his ashes in the Arno River. **14,271**

304 HELEN KELLER (1880–1968) *human miracle*

Blind, deaf, and mute, Keller likened her early childhood to "a phantom living in a no-world." Then when she was six, Anne Sullivan, the woman she would call Teacher, arrived. The two battled for weeks, but persistent Sullivan won. The breakthrough came as water splashed Keller, and Sullivan spelled the word *water* in Keller's hand in sign language. Knowledge lit

Keller's face, and she spelled the word back. It opened the floodgates to Keller's brilliant mind. With Sullivan tirelessly spelling out lectures in Keller's hand, she was able to attend Radcliffe College and graduate cum laude. This remarkable woman devoted her life to aiding the deaf and blind, traveling the world to raise money for the cause, and impressing all she met. On her seventy-fifth birthday she said, "My birthday can never mean as much to me as the arrival of Anne Sullivan. . . . That was my soul's birthday." **14,270**

305 **IDA B. WELLS-BARNETT** (1862-1931) *crusader for justice*

Wells-Barnett could have remained an obscure schoolteacher stomaching injustices against blacks in the South. But not Ida Bell. Ousted from a whites-only train car in 1895, she sued the railroad, winning in circuit court but losing in Tennessee's Supreme Court. When she decried inadequate schooling for black children, she was sacked from her teaching job. And when three friends were hanged by a white mob in 1892, she launched a national crusade against lynching through her writings in the newspaper *Memphis Free Speech*, of which she was half-owner. "I felt that one had better die fighting against injustice than to die like a dog or a rat in a trap," she later wrote. She helped found the National Association of Colored Women and the National Association for the Advancement of Colored People. **14,212**

306 **THOMAS MALTHUS** (1766-1834) *population doomsayer*

Malthus, an English economist who wore his hair in ringlets and powdered them pink, worried that the poor were having too many babies. Sound familiar? "A half-starved Highland woman frequently bears more than 20 children, while a pampered fine lady is often incapable of bearing

any," he fretted. He urged people to marry late and employ the "vice" of contraception. Though his methodology was questionable (he used American data supplied by Benjamin Franklin (54) but forgot to ask if they included immigrants), Malthus talked Prime Minister Pitt into dropping his support for poor relief. To his credit, he deflated the faith in human progress of utopian thinkers like his father's friend, Jean-Jacques Rousseau (19). Malthus also influenced Darwin's (7) thinking and helped instigate the population control movement. He had three children, 0.9 above the zero-population-growth replacement level. **14,202**

307 **PIERRE BEAUCHAMP** (1636-1705) *choreographer of ballet's basics*

Ballet students know the five fundamental positions that dictate most classical ballet movements. These range from the first, in which the feet, pointing out, form a straight line, to the fifth, in which the feet are parallel and facing opposite directions. It's the fifth that does most of us dancer-wannabes in. Some historians credit the creation of these positions to Beauchamp, but others say he was merely the first one to write them all down. No matter. His work promoted ballet as a discipline that could be studied and learned. Born in Versailles, France, Beauchamp was from a family of troupers. He served as the superintendent of ballets of the king and had an impressive career as a dancer himself. He makes our book not for his performance but for codifying the art of ballet. **14,176**

308 **ELISHA OTIS** (1811-1861) *uplifting inventor*

A prehistoric human trying to hoist something up a tree invented the elevator by throwing a rope over a limb. Otis invented a way to avoid

disaster if the rope broke. He built the first elevator with an automatic safety brake—a steel spring meshing with a ratchet—and unveiled it at the 1854 Crystal Palace Exposition in New York. Otis, standing on the platform halfway up a shaft, had an assistant cut the hoisting cable, and the brake held. After that, buildings could be as tall as architects could design them, which makes Otis a towering figure in the history of skyscrapers. He was a Vermont farm boy turned mechanic who perfected his elevators in the service of a Yonkers, New York, bedstead company that needed to lift heavy machinery to the upper floors of a factory. In 1857 he constructed a passenger lift, and the name Otis has been associated with elevators ever since. **14,151**

309 **FERDINAND RITTER VON MANNLICHER** (1848–1904) *inventor of the cartridge clip*

Only a blip in the million-year history of warfare technology, Mannlicher nevertheless played a key role in creating the repeating rifle and thus holds indirect responsibility for millions of battlefield deaths. For us, he symbolizes man's ageless impulse to improve upon the means of mass slaughter, from the prehistoric putterer who tipped his stone spear with bronze to the makers of the nuclear bomb. Mannlicher epitomizes the nerdy side of warcraft, the tinkerer entranced with technological advance, as opposed to the general who commands or the soldier who fights. We could have chosen any number of Industrial Revolution innovators for this spot, like William Armstrong, the British solicitor who designed the modern rifle with its "fine spiral grooves" (as one enthusiast called them) to assure a spinning projectile. But Mannlicher, an Austrian railroad engineer who created 150 types of repeating guns and automatic rifles, will do. **14,142**

310 **RAM SINGH** (1816–1885) *Sikh advocate of ousting the British from India*

Many Americans learn about British rule in India by watching Cary Grant (952) in the film *Gunga Din* or Shirley Temple's *The Little Colonel*. The truth of Britain's domination of India was much harsher than anything Hollywood dished up. Singh was moved to action. He served in the Sikh army, then organized a group called the Kukas. They wore white robes and turbans, chanted prayers in a special way, and followed secret rituals. Because these men were poor and from low castes, they had unquestionably accepted British domination until Singh came along. When an all-out revolt appeared inevitable, the British tied Kukas to cannons and blew them to pieces. Singh advocated civil disobedience and boycott of British goods. The British threw Singh in prison and then exiled him until his death. **14,138**

311 **THOMAS PAINE** (1737–1809) *writer with a Common Sense message*

Englishman Paine's life changed upon meeting fellow lover of liberty, Benjamin Franklin (54), in London in 1774. Franklin gave Paine a letter of introduction for the colonies. There the political philosopher wrote his famous fifty-page pamphlet *Common Sense*, which galvanized public opinion in favor of independence. The pamphlet sold a half million copies in three months and paved the way for the Declaration of Independence. During the ensuing war Paine reminded the suffering, half-starved troops of their higher mission in *The American Crisis*. "These are the times that try men's souls," he wrote. "Tyranny, like hell, is not easily conquered; yet we have this consolation with us, that the harder the conflict, the more glorious the triumph." Paine's other immortal work was *The*

Rights of Man, written in 1791. In it he defended the French Revolution and condemned monarchies. It inflamed British leaders, who had Paine charged with treason and tried in absentia. **14,101**

312 **DAVID BEN-GURION** (1886-1973) *founder of Israel*

When Ben-Gurion was growing up in Poland, Jews were so passive that whenever a pogrom destroyed their villages and killed their families, they did not resist. Ben-Gurion, who grew up among Zionists, urged comrades to fight in self-defense, but always he dreamed of a Jewish state. Born David Gruen, he changed his name to honor an ancient Jewish hero who defended Jerusalem from the Romans. After relocating to Jerusalem in 1910, Ben-Gurion lobbied for a Jewish state. Decades of struggle and negotiation followed, culminating in Ben-Gurion's announcement of Israel's formation in a radio address on May 14, 1948, the day the British pulled out of the region. The next day, five Arab countries attacked the infant nation. With Ben-Gurion as prime minister, Israel weathered the hostilities. Jews affirmed they were no longer passive victims, and the Israeli army became known as one of the best, and most dreaded, in the world. **14,087**

313 **IBN TAYMIYAH (TAQI AD-DIN)** (1263-1328) *Islam's keeper of the fundamentalist flame*

Ibn Taymiyah's philosophy can be summed up in the title of his essay, *The Steps Leading to the Knowledge That the Messenger of God Has Already Made a Clear Exposition of the Roots and Branches of Religion*. Medieval Islam was buffeted by revolutionary tendencies, and a sense of permissiveness about doctrine began to take root. Ibn Taymiyah espoused a philosophy that put on the brakes and called for strict adherence to the literal word of the

Koran and a commitment to community institutions, particularly the state. Every future Islamic thinker who rejected over-intellectualism—and there have been many, down to Iran's Ayatollah Khomeini—is a philosophical descendant of Ibn Taymiyah, though he was never a fanatic. He spent time in jail for his beliefs, but to Ibn Taymiyah, "only someone who has shut out God from his heart is a prisoner." **14,083**

314 **JONAS SALK** (1914-1995) *physician who crippled polio*

When Dr. Salk injected dead poliomyelitis virus into monkeys and caused antibodies to form, the scourge of this paralyzing disease was about to be over. Epidemics in the United States had afflicted 27,000 people in 1916, 25,000 in 1946, 58,000 in 1952, and 35,000 in 1953. By 1957, with Salk's vaccine in use, cases dropped to 5,000. Salk developed the vaccine at the University of Pittsburgh School of Medicine. His breakthrough: creating a tissue culture lab that produced quantities of vaccine like never before. Almost two million children were guinea pigs in the largest field trial ever. Rival Albert Sabin, who later produced his own live virus vaccine (the one that is now in wide use), criticized the process as rushed and questioned the Salk vaccine's safety. But it was proven effective and released in 1955, making Salk an international hero. Asked who owned the patent on the vaccine, Salk replied, "There is no patent. Could you patent the sun?" **14,044**

315 **WILLIAM BLAKE** (1757-1827) *mystic poet*

It is for the lyrical magic of his verse (illustrated by his own engravings) and for his influence on English romanticism that we rate Blake so high. Think of his powerful imagery: "Tyger! Tyger! burning bright / in the forests of the night." A. E.

Housman pronounced him "more poetical than Shakespeare." We are almost as entranced by his otherworldly visions as by his verbal inventiveness. He saw God's head in a window at the age of four. The biblical Lot sat for a portrait in his studio. Just before he died, a witness reported, "he burst out singing of the things he saw in Heaven." Was he mad? Endowed with "eidetic vision," the ability to project mental images into the physical world? Enraptured of the Holy Spirit? It doesn't matter; Blake was filled with such a furious and joyful imagination, you just gotta love him! **14,039**

316 **BARTHÉLEMY THIMONNIER** (1793–1859) *inventor of the sewing machine*

In the American schoolchild's litany of great inventors, Elias Howe has this category sewn up, but that is just another example of American cultural imperialism. Thimonnier, a Parisian tailor, constructed the first crude mechanical sewing machine and secured patents in 1830, sixteen years before Howe. His wooden device required skilled operators to feed fabric manually to make even stitches. Sadly for Thimonnier, he never publicized how crucial seamstresses would be to the operation. After he constructed eighty machines to fill a contract for army uniforms, a gang of seamstresses and tailors, fearful that they would be displaced by new technology, broke into the workshop. They pummeled Thimonnier and destroyed his machines. While Thimonnier continued to improve his designs in France, Howe and Isaac Singer took their patent battle to court. Howe won the money, but Singer's name has been associated with sewing machines ever since. **14,022**

317 **HORACE MANN** (1796–1859) *public education's champion*

Public schools, or common schools back then, failed Mann miserably. A poor boy in Franklin,

Massachusetts, he went to common school but left because the teachers were inept. He educated himself at the local library, attended Brown University, and graduated valedictorian. With a law degree he entered politics, later heading the Massachusetts Board of Education. Public schools then were offering the bare minimum, and people didn't expect more. Mann changed their thinking by railing against unqualified teachers, shoddy management, and short school terms. He believed a republic's survival depended on informed citizens and that this necessitated free universal education. Deeply religious, Mann nevertheless insisted that religion be purged from state-supported schools. Weeks before his death, he advised Antioch College graduates to "be ashamed to die until you have won some victory for humanity." His victory: starting the movement that produced the most extensive public school system in history. **13,994**

318 **WALT WHITMAN** (1819–1892) *America's poet*

Nineteenth-century America was a place where poets glorified daffodils or turned to England for romanticized iambic guidance—that is, until our man Walt arrived on the scene. Whitman was an unknown and a bit of a ne'er-do-well journalist when he sent his *Leaves of Grass* to Transcendentalist high priest Ralph Waldo Emerson (504). Emerson loved it: "I find it the most extraordinary piece of wit and wisdom that America has yet contributed." Whitman dipped into his own pockets to publish it, then spent his life rewriting and promoting it. He even wrote a favorable review—anonously, of course. It's a shame so many Americans remember Whitman for his schmaltzy eulogy to the fallen Abraham Lincoln (32), "O Captain! My Captain!" That's Whitman at his rhyming best, but it's his audacious use of

free verse and celebration of common people in a democracy that earns Whitman a place in our hearts (and our book!). **13,976**

319 **DONATELLO** (c.1386-1466) *innovative Renaissance sculptor*

Born Donato di Niccolò de Betto di Bardi in Florence, Donatello came of age in the art world by helping create bronze doors on the city baptistery. He switched to marble and wood to create his most memorable sculptures. Generally considered one of the four greatest artists of the Italian Renaissance—along with Michelangelo (13), Leonardo (9), and Raphael (129)—Donatello worked closely with the architect Brunelleschi (85). When Donatello sculpted a slumped, weakened Christ on the crucifix, Brunelleschi criticized its realism. Legend holds that Donatello had such a hair-trigger temper that he once hurled a bronze head out a window when a client protested that he was being overcharged. Genius, however, has its privileges. Donatello, who developed techniques to enhance depth in sculpting, is also hailed today as one of the greatest artists who ever lived and a developer of perspective in sculpture. **13,954**

320 **JOHN HAWKINS** (1532-1595) *sea dog of the slave trade*

A picture of a chained African adorned Hawkins's coat of arms in recognition of his daring early voyages. The English raider swooped down on Portuguese slavers, who had started the evil trade, stole their cargo, and sold the slaves in the Spanish West Indies. Those who refused to buy risked having their villages sacked by Hawkins's crews. So began the English slave trade that flourished for more than two centuries. In the 1580s Hawkins was treasurer of the navy, and though suspected of graft, he outfitted

the fleet so well, it defeated the Spanish Armada in 1588. That gives Hawkins a niche in some histories as founder of the modern British navy. He blamed God for his failure to capture the Spanish treasure fleet in 1590, prompting a disappointed Queen Elizabeth (31) to swear, "This fool went out a soldier, and has come home a divine." **13,953**

321 **GIOVANNI BOCCACCIO** (1313-1375) *curtain raiser on the Renaissance*

The *Decameron*, completed by the Italian in 1353, was the first great comedic book of the millennium, though its backdrop is far from funny. In Florence ten people who are in quarantine together during a plague each tell ten stories about love, sex, religion, and politics—stories full of mistaken identities, ribaldry, and satire that skewers just about everything and everybody. In one story a pious Jew refuses to convert to Christianity until he visits Rome and is dazzled by lustful, slothful, and gluttonous priests. Biographer Thomas Bergrin called Boccaccio's masterpiece "skeptical, affable, and all but dangerously open-minded," qualities that demonstrated the new spirit of irreverence that was soon to flower in the Renaissance. Boccaccio would not be politically correct today. He was fat, and one of his other books was a venomously misogynist tome, *The Corbaccio*. **13,922**

322 **LOUIS ARMSTRONG** (1900-1971) *Mr. Jazz*

Known as Satchmo, short for "Satchel Mouth," Armstrong grew up in New Orleans, where jazz was born. He played cornet in marching bands and on Mississippi riverboats until his career took off in 1922, with a stint with King Oliver's band in Chicago. Armstrong's wild and dramatic trumpet-playing set jazz on fire. He launched the

instrumental solo in jazz performances and later, with ensemble recordings, established himself as a jazz virtuoso. He's also credited with creating "scat," the stringing together of meaningless syllables using the voice like an instrument. People kept asking him when he was going to quit, Armstrong said at age sixty-one. "I tell them, musicians don't quit; they just stop when there ain't no more gigs." His gigs ended a decade later—but not his influence. "Without him," said trumpeter Clark Terry, "we wouldn't have had anything to follow." **13,901**

323 MARGARET FULLER (1810–1850) *rebel against women's dismal status*

Mary Wollstonecraft (45) had been dead nearly fifty years and no one was talking about suffrage or equality when Fuller's *Woman in the Nineteenth Century* revived interest in women's rights. Published in 1845, the book boldly decried women's lowly economic, social, and political status. A protégée of Ralph Waldo Emerson (504), Fuller was among the early female newspaper writers. Horace Greeley hired her as New York's first literary critic. So biting was her commentary that competitor Edgar Allan Poe (279) lamented the world had three types of people: "Men, women, and Margaret Fuller." Hers is a tragic story. On a fateful European trip, she met up with an Italian revolutionary and gave birth to an illegitimate son. The priggish Greeley fired her. Fuller was forced to return to America with her lover, child, and a book-length manuscript, but the boat sank in a storm off Fire Island, New York. Everyone perished. **13,877**

324 HUNG HSIU-CH'UAN (1814–1864) *delusional destroyer*

This self-proclaimed younger brother of Christ parlayed his messianic complex into a religious

movement that almost toppled the Manchu dynasty and culminated in the deaths of twenty million people. It was one of the oddest and saddest episodes in history. Hung had a nervous breakdown at twenty-three after failing a civil service exam for the third time, then fell into a delirium in which two men urged him to purge the world of devils. Years later, skimming through a Christian tract, he concluded that the figures were God and Christ—and he was God's second son. In America today the guy would be ranting on a street corner. But in China in 1850 he found a receptive audience in the impoverished masses, raised an army, captured Nanking, declared a Heavenly Kingdom, ordered his top generals assassinated, locked himself in his palace with eighty-eight concubines, and committed suicide as government troops moved in. **13,844**

325 DOMINGO FAUSTINO SARMIENTO (1811–1888) *beacon of freedom to Latin America*

Sarmiento's 1845 essay, "Culture and Barbarism," should be required reading. It is a beautifully written plea to Latin Americans to shed the thuggishness and strongman politics spawned by the culture of the plains-riding gauchos and to adopt European manners and the gung-ho spirit of the United States. After traveling widely in North America, Sarmiento returned home and led efforts to bring modern education to his country. Turning to politics, he helped lead the forces that in 1852 overthrew Argentina's prototypical dictator, Juan Manuel de Rosas. Sarmiento had a chance to put his teachings into practice; he was president of Argentina from 1868 to 1874. Democracy has been short lived in many South American countries, but Sarmiento's life and work are an inspiration to all people who love freedom and reason. **13,842**

326 HENRY BESSEMER (1813-1898) *metallurgy master*

Briton Bessemer helped usher in the Age of Steel by inventing a converter that produced steel at lower costs. American William Kelly first realized malleable iron could be produced by blasting pig iron with oxygen. Bessemer stumbled upon the same chemical change eight years later. "All this was a revelation to me," he said, "as I had in no way anticipated such violent results." But Bessemer gets kudos for designing machinery to mass-produce steel: a brick-lined cylinder that stayed upright during the heating process, then was tipped on its side to load hot pig iron or pour molten steel. The Bessemer converter produced twenty tons of steel in twenty minutes. Soon the new railway industry was replacing wrought-iron rails with cheaper and sturdier steel rails. To honor Bessemer's contribution, at least six steelmaking towns and counties in America were named after him. **13,819**

327 PAUL MCCARTNEY (b. 1942) *singer/songwriter and bassist for the Beatles*

Imagine our dilemma if Beethoven (10) had been born in 1942. Sure he's important, but how can we gauge lasting influence? With his fellow Englishman John Lennon (328), McCartney wrote and performed for the most influential band in the twentieth century, but rock 'n' roll is a mere blip on the timeline of the last thousand years. Will citizens of the world in the year 2100 sing a tune like "Yesterday" the way we hum Beethoven's Fifth? We're betting they will. McCartney's first instrument was a trumpet, but he traded it in because he couldn't sing and play at the same time. Then he restrung his guitar to play left-handed. The mop-topped "Fab Four" revived rock 'n' roll, pioneered music videos, and starred in full-length movies. By the time the

Beatles split up in 1970, their records had outsold every other performer in history. When they write the book for the third millennium, the Beatles might just roll over Beethoven. **13,808**

328 JOHN LENNON (1940-1980) *founder and songwriter for the Beatles*

Beatlemania ruled. Girls fainted in hysteria. Crowds surged. The Beatles filled football stadiums. The year was 1966, and Lennon, the first Beatle, observed that his group was now "more popular than Jesus." Always the heretic and most political member of the Beatles, Lennon generated storms of criticism from religious zealots, the political right, and parents who didn't want their children influenced by these demons. Time has quelled the maelstrom. Today the Beatles have multigenerational appeal. Lennon was still in high school in Liverpool, England, when he organized The Quarry Men in 1957. Lennon, Paul McCartney (327), George Harrison, and Ringo Starr topped the record charts with such early songs as "Love Me Do," "She Loves You," and "I Wanna Hold Your Hand." After the Beatles' breakup in 1970, Lennon recorded with his poet wife, Yoko Ono, but was silenced too soon by a gunman in New York. **13,796**

329 SAMUEL MORSE (1791-1872) *inventor of the first practical telegraph*

Sailing home to America from Europe in 1832, Morse overheard an amateur scientist's remark that the flow of electricity is unhindered by the length of the wire. "If this be so," he recalled responding, "I see no reason why intelligence might not be instantaneously transmitted by electricity to any distance." So he set out to make a telegraph. When he demonstrated a primitive model in his

Manhattan apartment in 1835, a friend derided it as a "mantel ornament." Morse persisted and in 1844 built the first American telegraph line, from Baltimore to Washington. Using his Morse code of dots and dashes, he sent his famous message: "What hath God wrought?" By century's end telegraph wires crisscrossed the globe. It was the biggest advance in the speed of communications since the horse. Morse was also an accomplished painter, whose *Gallery of the Louvre* fetched \$3.2 million in 1982, the most ever paid for an American work of art at the time. **13,788**

330 ALEKSANDR PUSHKIN (1799–1837) Russia's national poet

The French-loving Russians believed that their language was too barbaric for literature. Pushkin proved them wrong with romantic poems, short stories, essays, and a novel, *Eugene Onegin*, his chef d'oeuvre, or should we say шедевр. This verse tale of love and redemption proved that Russian writers could create beauty without using another country's voice. English scholar A.D.P. Briggs wrote, "Anyone who takes the trouble to learn Russian in order to read Pushkin will never regret it." Pushkin's paternal great-grandfather was a black African who was ennobled after serving Peter the Great (27), and like other spirited Russian blades, young Pushkin was a gambler, girl-chaser, and sometime soldier. He also had liberal leanings, which disturbed czarist censors from time to time. But he died like an aristocrat, shot in a duel with a French diplomat he had accused of seducing Mrs. Pushkin. **13,754**

331 SANDRO BOTTICELLI (1445–1510) Florentine Renaissance master of color and rhythmic line

Sandro inherited the name Botticelli from older brother Giovanni, whose nickname was "little

barrel." After an apprenticeship with Filippo Lippi, he became the favored painter of the all-powerful Medici family. Botticelli's masterpieces, *The Birth of Venus* and *Primavera*, show his love of classical myth and idealistic portrayals of beauty and grace. At the height of his career, Dominican priest Savonarola (303) came to town, preaching a more puritanical religion. Botticelli listened, and his paintings changed. In *The Calumny of Apelles*, his lines became sharper, his themes more tortured. He withdrew from the artistic community and plunged into his long-held mission of illustrating Dante's (30) *Divine Comedy*. The world soon forgot him and warmed to Leonardo (9), Raphael (129), and Michelangelo (13). It took over three centuries before Botticelli's genius was rediscovered by some English intellectuals. Did fate decree that one of them would be Dante Gabriel Rossetti? **13,751**

332 KUBLAI KHAN (1215–1294) Mongol ruler of the empire's apex

The only reason history has recorded so much about the Great Khan is that he provided safe passage to China for two Venetian merchants and one of their sons, the famed Marco Polo (66). Young Marco's diary of his adventure illuminates life in the Mongol empire. So appealing was Kublai's story that writer Samuel Taylor Coleridge (394) immortalized the ruler's palatial summer home in every schoolchild's nightmare poem, "Kubla Khan." Kublai, grandson of notorious bad boy Genghis Khan (43), built one of the biggest empires in history, encompassing eighty percent of Eurasia and unifying China under one ruler. Before amassing his territories, however, Kublai fought a civil war against his younger brother for the title of Great Khan. Then he led his armies through China and proclaimed himself heir to that

country's Dragon Throne. His troops conquered Burma and Indochina, but typhoons thwarted attacks on Japan. **13,708**

333 CHRISTIAAN HUYGENS (1629-1695) *scientific light*

The Dutch Huygens is best known for his wave theory of how light travels. We don't wish to get too Freudian, but . . . he also discovered the pendulum, with its *steady, rhythmic motion*; was the first to propose that Earth is an *oblate spheroid*; did pioneering work on *rotating bodies* and mathematical *curves*; developed a new method of *grinding* lenses for telescopes; and discovered the rings that *caress* Saturn. The guy was obsessed! Huygens was also a contender with Pascal for the title of father of probability theory, and he came up with early calculations for winning or losing at games of chance, like his third proposition: "To have p chances to win a and q chances to win b , the chances being equivalent, is worth $(pa + qb)/(p + q)$ to me." **13,701**

334 ANDRÉS BELLO (1781-1865) *South American statesman and intellectual*

The Venezuelan-born Bello roamed Europe with his pupil, Simon Bolívar (48), the future liberator of much of South America, to rally support for his continent's independence. Even revolutionaries must eat, so Bello took a job sorting files for the liberal English philosopher Jeremy Bentham (383). Bello read what he sorted. In 1829 he went to Chile and helped its revolutionary government write a constitution based on Bentham's liberal principles. Bello authored a civil code that other countries copied and that is still in effect throughout much of South America. He founded the University of Santiago. As a literary figure, Bello was anything but revolutionary, a

rare classical poet among Byron-bedazzled romantics. After three hundred years of evil colonialism, many writers of Spanish-speaking America were prepared to denounce everything that had emanated from the former mother country. But Bello taught South Americans to love what was good in Spain's culture. **13,699**

335 JAN VAN EYCK (1390-1441) *maestro of oil painting*

Van Eyck, the founder of the Flemish school of painting, was first to master the new technique of oil painting. His works glow from within, the pleasing products of countless coatings. Using an oak panel, he'd first spread thin layers of chalk and animal glue to smooth out the wooden surface and reflect light. Painstakingly he'd add colors diluted with turpentine. So precise was he—and so attuned to the smallest detail—that we can see silvery hairs on his figures' legs, the result of Van Eyck's scraping the surface with a pointed tool to expose the white layers below. His greatest work, *Adoration of the Sacred Lamb*, was so esteemed, it figured in the Treaty of Versailles. A clause required the Germans to return the masterpiece to Belgium before peace officially could be declared after World War I. **13,654**

336 LISE MEITNER (1878-1968) *mother of nuclear fission*

Meitner's description of the splitting of a uranium atom put her on the cutting edge of nuclear physics, but she refused to help build the nuclear bomb. In her heart she hoped that that kind of destruction would not be achievable. As a woman in a man's world, Meitner faced the predictable uphill battle: her parents insisted she take a teacher's exam so she could support herself; her first lecture in 1922 on cosmic physics was reported in a newspaper as "cosmetic

physics." She worked with such scientific luminaries as Max Planck (136) and Otto Hahn. When a supervisor barred her from Hahn's Berlin laboratory, they set up shop in a tiny workroom. Meitner, who was Jewish, was forced to flee Berlin in 1938 for Sweden. There she worked with her nephew to describe fission, which provided the key that unlocked the Pandora's box of nuclear war. **13,650**

337 JOHN WYCLIFFE (1330–1384) *the Reformation's herald*

"It is hard to say whether Luther and Wycliffe would have differed if they met," mused British scholar George Macaulay Trevelyan. Wycliffe's writings started Christendom questioning church authority, and the Reformation exploded across Europe in the sixteenth century. Wycliffe, who is credited with the first translation of the Bible into English, was violent in his attacks on Rome. He implored the "Church of wicked Spirits" to renounce its worldly possessions, assailed the doctrine of the transubstantiation of the bread and wine of the Eucharist into the body and blood of Christ as idolatry, and denounced the pope as a spiritual despot, asking, "Lord, where is freedom in Christ, when men are casten in such bondage?" Pope Gregory XI compared his heresies to "the perverse opinions and unlearned learning of Marsiglio of Padua (96) of damned memory." Perverse or not, Wycliffe coined the phrase "government of the people, by the people, and for the people." **13,645**

338 JOHANNES ECKEHART (c.1260–c.1328) *the meister of mysticism*

Eckehart preached that the godhead was an empty nothingness. If men renounced all sense of self and created their own nothingness, there would be a spark—a *Seelenfunklein*—and

a miraculous union between man and god would be forged. If you think this sounds like heavy-duty mysticism, go to the head of the *schola*. Meister Eckehart was the most influential Christian mystic of the Middle Ages, more like an Eastern philosopher than a scholar of Western Catholicism. His sermons were written in German—rare for speculative works until that other troublesome priest, Martin Luther (3), came along two centuries later. Pope John XXII condemned many of Eckehart's propositions as heretical, but Eckehart died before he could be punished. His philosophy is imbued with the mystical strain of Christianity that, even today, is one of its most powerful attractions. Among his famous sayings: "As man cannot live without God, so God cannot live without man." **13,609**

339 JAN PIETERSZOOM COEN (1587–1629) *empire builder*

Pepper, nutmeg, cloves: no cooks worth their salt would be without them. Trade in these commodities was so lucrative in Coen's day that the Dutch carved out a Southeast Asia empire, known as Indonesia, to safeguard their commercial interests. They kept control of these spice-producing lands—Sumatra, Borneo, Java, Celebes, the Moluccas, and some of the Lesser Sunda Islands—until 1949. Coen was instrumental in grabbing these territories. As director general of the trading group the Dutch East India Company, he fortified outposts on the archipelago, pushed out the Portuguese, and quashed English initiatives. He also was a merciless defender of Dutch (really, his own) interests. In his role as governor general, he dispatched a fleet to conquer the Banda Islands in 1621. The few natives who survived the bloody massacre were bound into slavery. **13,599**

340 FRANCISCO JOSÉ DE GOYA (1746-1828) *an artist at war with tradition*

Like Beethoven (10), he was deaf (Goya's deafness may have been caused by lead poisoning), and like Beethoven, he was disturbed by the excesses of Napoleonic violence. Both men created revolutionary works of art that inspired the romantics and realists who followed. Goya was a social-climbing Spaniard who churned out paintings of kings, queens, and courtiers. Then the Napoleonic war ravaged Spain, and in 1814 he produced his masterpiece, *The Third of May 1808*, a painting of faceless French soldiers shooting civilians. That and his collection of etchings depicting the horrors of the conflict are among the greatest war art of the millennium, though it's not clear whether they were expressions of Goya's true outrage or Spanish propaganda. Even critics who dislike Goya's work credit him with starting something new. "With Goya the modern anarchy begins," art historian Bernard Berenson lamented.

13,553

341 GEORGE BERKELEY (1685-1753) *perceptive philosopher*

Poor Berkeley; his insights into the nature of perception and his theory that the physical world exists only in our senses are a monumental contribution to Western thought, in some ways presaging quantum theory. Yet how the world has mocked him for his ideas! "Whether the external world exists or not, the wine at Bologna is extremely good," an Oxford don quipped. Even poet William Butler Yeats (521) belittled "God-appointed Berkeley, that proved all things a dream." Berkeley, an Anglican bishop, had his own dream—a college in Bermuda to spread the gospel among the New World Indians. So he sailed to America in 1728 and lived for three years in Newport, Rhode Island, waiting in vain for a

grant promised by London. After returning home, he wrote a brilliant treatise on mathematics, a discourse on economics, and a tome that combined philosophical ruminations with a discussion of the medical benefits of tar water.

13,551

342 FRANZ SCHUBERT (1797-1828) *prolific composer at the gateway to romanticism*

At least Mozart (52) was famous before he died. Though other composers knew of Schubert's brilliance, all but a tiny fraction of his towering compositions—symphonies, sonatas, chamber works, and songs—went unpublished until after his death at age thirty-one. Schubert's music straddled two eras: the classical of Haydn (296), Mozart (52), and Beethoven (10), and the romantic of Mendelssohn and Schumann, who created audiences for Schubert's work. Pop music-besotted moderns take note: Schubert's musical settings of Goethe (131), Friedrich Schiller, and Heinrich Heine poems have transported audiences for almost two hundred years, which is why we rate him over Irving Berlin (469) and Stephen Foster (833). And instrumental works, such as the piano impromptu and the "Trout Quintet," have not gone out of date either. There is a romantic myth that Schubert died from a fever he caught in the rain at Beethoven's funeral, but the truth is he died of syphilis.

13,544

343 JOHN XXIII (1881-1963) *the pope for a new age*

English-speaking Catholic children guffawed at this chestnut: What's the pope's telephone number? *Eccum spiritu tuo*. You can still coax a nostalgic smile with that joke from anyone who remembers the phrase's incantation in the Latin mass, but John XXIII sent the Catholic world to its knees with his modernization program. No one expected any departure from tradition when

Angelo Giuseppe Roncalli was elected pontiff at age seventy-seven in 1958. He surprised the complacent by convening the Second Vatican Council. The visible ramifications of "Vatican Two": Catholics talk less about sin and more about love; the mass has been translated into local languages; bongo drums, guitars, and folk songs make ceremonies appealing to youth; altars have been turned around to bring priests before the people; nuns have shed their habits; and Catholics have given up heavy-duty fasting in Lent and eat meat on Fridays. **13,512**

344 **GEORGE MARSHALL** (1880–1959) *Axis axer*

Winston Churchill (38) called the U.S. Army chief of staff in World War II "the organizer of victory," and we rate Marshall the greatest American general who never commanded troops in war. He was General John Pershing's chief planning officer in World War I and rose to army chief in 1939. When the war came, he directed the mobilization and strategy and picked the field generals, notably the commander in Europe, Dwight Eisenhower (374). Marshall had qualities that democracies require of military leaders: disdain for personal glory, respect for political authority, and intolerance for underperformers. After the war President Harry Truman (485) appointed him secretary of state and called America's generous European Recovery Program the Marshall Plan, in hopes that the former general's popularity would rub off on what was then a controversial idea. It did. **13,506**

345 **THOMAS MORE** (1478–1535) *a man for all seasons*

... is what Desiderius Erasmus (97) called his friend More because the author of the Renaissance classic *Utopia* never changed his cloak of rectitude

with the political weather. When England's Henry VIII (100) demanded allegiance to royal religious supremacy, his witty and learned friend and former supporter refused and was beheaded. He was canonized for his martyrdom in 1935. Young More wanted to take holy orders and he wore a hair shirt most of his life, but he liked women and preferred being a good husband to being a bad priest. Biographer Richard Marius called More a man torn between the necessities of making his way in the secular world and preparing his soul for the eternal world to come. More taught the world how to be a hero by choosing the latter. **13,477**

346 **AUGUSTE ESCOFFIER** (1846–1935) *a man for all seasonings*

Kaiser Wilhelm II (224) lauded his French culinary maestro Escoffier by observing, "I am the emperor of Germany, but you are the emperor of chefs." Escoffier's brilliant culinary career led him to the posh Savoy Hotel in London in 1890. There he created the now-famous peach Melba—poached peaches on vanilla ice cream, topped with raspberry puree—named for singer Nellie Melba. He moved on to the prestigious Carlton Hotel, also in London, where his reputation soared. In his cookbooks, which set the standard for haute cuisine, Escoffier never minced words. "Stock is everything in cooking, at least in French cooking," he said. "Without it, nothing can be done." Grudgingly he included recipes on appetizers and snacks but sniffed, "They have no raison d'être on a good menu." Despite the hefty cholesterol count in his dishes, Escoffier lived to the ripe old age of eighty-nine. Pass the butter, please. **13,456**

347 **GERARDUS MERCATOR** (1512–1594) *worldly cartographer*

Mercator came as close as anybody to achieving the impossible—drawing an accurate world map

by taking this sphere we call Earth and flattening it on paper. Okay, his famous Mercator projection in 1569 had inevitable distortions, but navigators still loved it. Its oh-so-precise and parallel lines of longitude and latitude allowed mariners to draw a straight line between two points and plot a course without resorting to frequent adjustments of compass readings. However, the Flemish mathematician and engraver wasn't the first to bind maps in book form; that distinction went to his rival, Ortelius, in 1570. But fifteen years later Mercator did launch his ambitious project to publish a collection of maps. He called it the *Atlas*, after the Greek demigod who cradles the world on his shoulders. In Mercator's lifetime the Low Countries became the world center of cartography. You might say he put them on the map. **13.444**

348 **THURGOOD MARSHALL** (1908–1993) *legendary civil rights attorney and first black U.S. Supreme Court justice*

Don't get mad, get even. Before Marshall made history as the champion of civil rights, he zapped the University of Maryland Law School, which had refused to admit him, with a lawsuit. The great-grandson of a slave crafted a civil rights legal strategy before the movement spilled over to lunch counters and the backs of buses. He persuaded the National Association for the Advancement of Colored People to attack the policy of "separate but equal" public schools. In his arguments in *Brown v. Board of Education* in 1954, he convinced the Supreme Court that segregated schools were a form of discrimination. Integration followed slowly. As a Supreme Court justice for twenty-four years, the liberal Marshall often penned dissenting opinions. A jokester who nurtured his reputation as a curmudgeon, Marshall quipped that he often voted with the majority on only one issue—when to have lunch. **13.441**

349 **CARDINAL RICHELIEU** (1585–1642) *creator of the modern French state*

He accomplished his two goals: to undermine the Spanish-Habsburg domination of Europe, and to establish royal absolutism in France. The portrait of Richelieu by Philippe de Champagne in the Louvre depicts a face, foxlike and sinister, that one would hesitate to cross even 350 years after his death. Alive, Richelieu was pitiless toward plotters against his beloved Louis XIII. (It took two jailbirds thirty-six swings of their dull-bladed axes to chop off the groaning head of the marquis of Chalais.) After all, the cardinal declared, "kings are the true images of God," and thus "subjects must blindly obey the prince." Richelieu could also be pragmatic, siding with Protestants to foil the Catholic Habsburgs' designs. After Richelieu's death Louis XIII sank into decline, but the stage was set for the glorious reign of his son, the future Sun King (63). **13.408**

350 **IBN AL-'ARABI** (1165–1240) *master of Sufism, Islam's mystical creed*

Young Ibn al-'Arabi frequented cemeteries because he liked to talk to dead people. He roamed North Africa and his native Spain in search of wisdom wherever he could find it. One of his masters was a ninety-five-year-old woman. In 1198, a vision told him to go east, so he settled in Mecca and wrote—actually, it was dictated by another vision, he said—the 560-chapter *Meccan Revelation*. Another of his books, *Bezels of Wisdom*, was dictated by Muhammad himself, Ibn al-'Arabi said. His works, still read today by his Sufi followers, teach that God can be discovered by those with the fortitude to make a spiritual journey aided by silence, isolation, fasting, and sleep deprivation. That path has been tried by millions of ascetics, be they lovers

of Ibn al-'Arabi's brand of Sufism or members of other religions. **13,400**

351 **CHARLES BABBAGE** (1792–1871) *inventor of the first computer*

Think of it: Here's a Brit who was born when George Washington (22) was president, and he built a Calculating Engine in 1822 capable of computing mathematical tables and printing the results. Then he designed his Analytical Engine, the forerunner of the modern digital computer. Unfortunately, Babbage struggled for funding to complete the project, despite his mother's urgings to continue "even if it should oblige you to live on bread and cheese," and his dream was forgotten until his unpublished notebooks were discovered in 1937. We would have ranked him higher, but his machine was so primitive and its applications so limited that its importance is mainly symbolic. In 1995 a section of his earlier engine was auctioned off to an Australian science museum for \$282,000. Babbage, who gave parties with performing dolls, wrote to Tennyson that the poet's line "Every moment dies a man, / Every moment one is born" should read "Every moment dies a man, / Every moment one and one-sixteenth is born." **13,391**

352 **ELVIS PRESLEY** (1935–1977) *the king of rock 'n' roll*

Presley's contribution was artistic and economic. More than any American singer, he produced enjoyable music in every popular genre: ballads, blues, jazz, gospel, rock, country, western, folk, even Christmas carols. Most important, he borrowed the sounds of black rhythm and blues, which had had a limited audience, and converted them into something new and acceptable to a mass international public. Adults were amused or shocked at the sneering kid with the swiveling hips, but no one did more than Presley to legit-

imize the sound and the culture that made rock music the art form and multibillion-dollar industry that it became. Biographer Albert Goldman wrote that on the day Presley's fading career ended with his drugged-up death, a Hollywood cynic quipped, "Good career move." The cynic was right. Cultural historians are beginning to find similarities in the mystical aura that surrounds the Presley legend and the way early Christians felt about Jesus. **13,347**

353 **JOHANNES BRAHMS** (1833–1897) *classical music's great romantic*

Johannes's piano teacher saw his prodigy as a concert pianist. But the nine-year-old preferred writing scores based on musical works. "It is a pity," teacher Otto Cossel said. "He might be such a good pianist, but he won't leave this everlasting composition alone." Thank goodness, for Brahms gave us his choral work *A German Requiem*, four symphonies including number 4 in E minor with its emotional finale, concertos, chamber music, his famous lullabies, and more than two hundred songs. Composer Robert Schumann heard twenty-year-old Brahms play his sonatas, and it was a revelation. "He began to open up regions of wonder," Schumann wrote. "We were drawn more and more into charmed circles." Germans took their musical disputation very seriously. From the moment of Schumann's endorsement of the young genius, Brahms was in his conservative camp, opposite the "enemies," the school led by Liszt (300) and Wagner (165). The division persisted past their lifetimes. **13,319**

354 **NELSON MANDELA** (b. 1918) *nemesis of apartheid*

For 342 years, the minority whites ruled South Africa and enforced a policy of racial segregation called apartheid, a regional term for "apartness." Mandela, born to be chief of the Thembu tribe,

joined the guerrillas seeking to overthrow the government. Rising to the top ranks of the rebel army, he was captured in 1962 and jailed for twenty-seven years. During his incarceration, Mandela became an international legend, a symbol of resistance to the last openly racist regime on earth. When he was freed in 1990, he led negotiations with then-President F. W. de Klerk to transfer power to the black majority. A graying distinguished elder statesman when he finally ascended to the presidency in 1994, Mandela summed up his personal philosophy in his autobiography: "People must learn to hate, and if they can learn to hate, they can be taught to love." **13,318**

355 MARIA THERESA (1717-1780) archduchess of Austria

At twenty-three she inherited much of the Netherlands, Bohemia, Austria, and Hungary, along with toothless rheumy advisers with no diplomatic or political skills. It was a scary start for Maria Theresa, but she found able ministers and generals and kept the Austrian empire from succumbing to the power of her neighbors, particularly Frederick the Great of Prussia (58). Without Maria Theresa's leadership, the Austrian empire would have been gobbled up long before its demise after World War I, and the map of Europe would have looked different for 150 years. She was an implacable defender of Catholicism, conservatism, and old-fashioned morality, but like her daughter Marie-Antoinette (781), she loved entertainment. Her Viennese court became the music capital of Europe. There an eight-year-old Mozart leaped into Maria Theresa's plump arms and kissed her. **13,317**

356 FIRDAWSI (c.940-1020) the Homer of Persia

His sixty-thousand-verse *Shah-nameh* is the national epic of Persia, and no Islamic poem matches the

beauty of its language. Sultan Mahmud of Ghazna (583) decided he wanted a work that glorified his country, and he picked Firdawsi to write it after a competition among a dozen of the best court poets. The pay was to be one gold coin per verse. It took Firdawsi thirty-five years to finish, and when the sultan sent silver instead of gold in payment, poet and potentate had a falling-out. Firdawsi complained, Mahmud threatened to have him trampled by elephants, Firdawsi retaliated by writing a satire about Mahmud's slavish origins and had to flee for his life from the angry ruler. Years later, legends say, the sultan realized how great Firdawsi's poem was and sent the gold, but it arrived on the day of Firdawsi's funeral. **13,288**

357 WALTER SCOTT (1771-1832) inventor of the historical novel

Scott's tales, from *Rob Roy* to *The Heart of Midlothian*, make history come alive. Most enduring is *Ivanhoe*, a romantic adventure tied to Richard the Lion-Hearted's return from the Crusades. Scott was crippled by polio as a boy, suffered a debilitating illness in midlife, and faced financial disaster in his fifties. He met each setback with stoicism and nobility—much like his characters. Scott grew wealthy but was disastrously free-spending, purchasing an estate in Scotland and investing heavily in his publishing house. The financial crash of 1826 ruined him. When Scott finally acknowledged authorship of the popular *Waverley* novels, published anonymously, he joked he had ceased to be the "Great Unknown" and become the "small known." Still, as he later wrote in his journal: "I had the crown." **13,276**

358 BETTY FRIEDAN (b. 1921) the center of feminism's second wave

Friedan struck a national nerve when she described "the problem that has no name" in

her landmark *The Feminine Mystique* in 1963. A journalist, she decried the fact that although women were being educated for careers, they were forced to retire when marriage and motherhood intervened. Then their biggest challenges were "ring around the collar" and the "heartbreak of psoriasis." Her ideas—published forty-three years after the feminist movement stalled when American women won the right to vote—opened act two of feminism. In 1966 Friedan founded the National Organization for Women and was one of the most vocal supporters of women's equality in the home, the workplace, and the political arena. Although the proposed Equal Rights Amendment to the U.S. Constitution failed, the vocal and visible international women's rights movement that Friedan triggered did much to improve the lives of women around the world.

13,270

359 HENRY II OF ENGLAND (1133–1189) *judicious nation builder*

English justice in the Middle Ages was meted out by self-serving barons until Henry shifted power to royal judges. They roamed the country in the king's name, an important start toward the national justice systems so crucial to democracy in the English-speaking world. Henry's desire to run a good kingdom was matched by his vigor in battle, but like a lot of workaholics, he should have spent more time with his family. Egged on by Henry's wife, Eleanor of Aquitaine (420), his four sons rebelled from time to time, and when Henry died in bed, he was mourned by few of his countrymen. Not so his martyred friend Thomas Becket, whose appointment as archbishop of Canterbury Henry had fostered. When the two men struggled over administration of the church, Henry's henchmen murdered the archbishop on his own altar.

13,214

360 BABE RUTH (1895–1948) *the Sultan of Swat*

During World War II Japanese soldiers storming Marine lines on the Pacific island of New Britain cried, "To hell with Babe Ruth!" Such was George Herman Ruth's status as an American icon. Ruth revitalized baseball, the Great American Pastime, by making it a game of power as well as finesse. The left-handed "Babe" was among the American League's best pitchers when his Red Sox manager switched him to the outfield, and his overwhelming hitting power surfaced. During his glory days with the New York Yankees, Ruth led the American League in home runs for twelve years. Successors have broken a string of his records, but no one has come close to replacing him as the millennium's most famous hitter. A big man at six foot two and 215 pounds, Ruth was a warm-hearted womanizer and boozier whom fans always forgave. Indeed he was, as sportswriter Paul Gallico said, a "swashbuckler built on gigantic and heroic lines."

13,197

361 YAMAGATA ARITOMO (1838–1922) *statesman who built Japan into a military force*

We don't like to point fingers, but if you're looking for a fall guy for the Japanese attack on Pearl Harbor in 1941, the yen stops here. Yamagata planted the idea of war with the United States in 1904. The Plan of National Defense of the Empire was a strategic blueprint that guided the Japanese war plan three decades later. Born to a family of low samurai rank, Yamagata advocated a modern military after he was wounded in a skirmish with a Western army. He traveled to the West to observe armies and returned in 1870 to Japan, where he patterned the Japanese force after the successful Prussian army. Yamagata instituted conscription to build his forces and

ultimately commanded the modernized Imperial Guard. A soldier at heart, he served as prime minister in the 1890s and later was the head of the military dictatorship. **13,164**

362 **PIERRE DE FERMAT** (1601-1665) *author of history's most famous mathematical puzzle*

Forget that Fermat discovered or codiscovered the modern theory of numbers, the fundamental principle of analytic geometry, differential calculus, and the theory of probability, all in his spare time. (He was a French judge who once condemned a priest to be burned at the stake.) Fermat's celebrity rests on a tantalizing note he jotted in a textbook on his "last theorem," that " $x^n + y^n = z^n$ " has no whole-number solution when n is greater than 2. "I have discovered a truly marvelous proof, which, however, this margin is too narrow to contain," he wrote. But what proof? For 350 years the enigma defeated all comers. *Scientific American* even printed postcards declining readers' requests to evaluate their solutions. Then in 1993 Princeton University mathematician Andrew Wiles solved the theorem after eight years of toil. Did Fermat have a simpler demonstration? We know the answer, but the margin of this book is too narrow to contain it. **13,157**

363 **CONSTANTIN BRANCUSI** (1876-1957) *molder of abstract forms*

Brancusi turned a Paris atelier into a rustic Romanian hut to recreate his peasant origins. His sculpture was just as simple, with pure lines and smooth textures. "Don't look for obscure formulas or mysteries," he said. "I am giving you pure joy." His artistic vision deeply influenced the way modern sculptors, painters, and industrial designers view the concept of form. Brancusi liked to carve in wood, then recreate the piece in bronze

or marble. Two of his favorite organic shapes: the egg and the elongated cylinder. Another was the flying bird. But his very abstract *Bird in Space* was grounded by U.S. customs officials, who thought he was sneaking an industrial part into the country. Brancusi sued. In 1928 the Supreme Court ruled in his favor, declaring the object a "new direction" in art. It's now perched in New York's Museum of Modern Art. **13,155**

364 **LUDWIG MIES VAN DER ROHE** (1886-1969) *the man who made glass houses*

You might want to throw stones at him, but Mies makes our list because he's behind the glass and steel that shapes city skylines. Born in the ornate Victorian Age, Mies decreed "less is more" and launched minimalist modernism in architecture. A German by birth, Mies moved to the United States after the Gestapo closed his Bauhaus School of Design in 1933. Mies believed design needs to represent "the very innermost structure of the civilization from which it springs." And so for him, buildings needed to reflect the technological society of the twentieth century—"an architecture that anyone can do." Nearly every city boasts a Mies original. It's hard to pick a favorite when you're talking glass monoliths, but there's a warm place in our hearts for Newark's Colonnade Apartments, which we've been driving by rather regularly since it went up in 1958. **13,119**

365 **SØREN KIERKEGAARD** (1813-1855) *progenitor of existentialism*

The Danish philosopher's influence on modern thinkers, from Freud (15) to Sartre, was enormous. He held that existence means making moral choices and acting on them, with the most important being a "leap of faith" to overcome despair. The reward is great: "God sees that which is hidden and

knows the torment; He counts the tears and forgets nothing." As a child, Kierkegaard was shaken by "the great earthquake"—his pious father's revelation that he had once climbed a hill and cursed God. A handsome, sad-eyed hunchback gripped by a lifelong melancholy he called "my castle," Kierkegaard broke an engagement to his beloved Regine Olsen to pursue God. He attacked the church in Denmark as a static "Christianity of nincompoops" that "perishes in the palaver" of its pastors. But he had bigger game in mind, the Hegelianism then sweeping Europe, arguing that its attempt to systematize reality was futile. **13,088**

366 JOHN DRYDEN (1631–1700) *literary leopard who changed his spots*

Making enemies was a habit for him. First he praised dictator Oliver Cromwell (162). Then he welcomed King Charles II from exile and was rewarded with the post of poet laureate. Then he was declared poet *non grata* for converting to Catholicism. Dryden suspected, but couldn't prove, that the assailants who almost beat him to death in a London alley in 1679 were hired by an aristocrat who believed Dryden had mocked him in an anonymous verse. Through all these crises his plays packed in audiences and made him the most famous writer in England for four decades. English professors are his plays' only big fans now, but his literary criticism still sings, particularly essays that helped make Shakespeare (5) a god. And his poetry endures. "None but the brave, deserve the fair," he wrote in "Alexander's Feast," one of our favorites. **13,084**

367 EZRA POUND (1885–1972) *mad gadfly of American letters*

Few writers in history have so dominated the literary scene: as an American in Europe,

Pound promoted T. S. Eliot (720), James Joyce (171), D. H. Lawrence, Robert Frost (828), and Marianne Moore and profoundly influenced William Butler Yeats (521) and Ernest Hemingway (388). Eliot dedicated "The Wasteland" "To Ezra Pound, il miglior fabbro" ("the better smith"), and indeed, Pound's wordsmithery was masterful. As a boy, he resolved to "know more about poetry than any man living," and he succeeded. Listen to the sea in the *Cantos*, his masterpiece: "And the blue water dusky beneath them, / pouring there into the cataract, / With noise of sea over shingle." Alas, the great mind misfired. Pound made Jew-baiting, pro-Fascist broadcasts from Italy in World War II and, indicted in the United States for treason, spent twelve years in a mental hospital. Maybe novelist Ford Madox Ford wasn't joking when he called him "the kindest-hearted man who ever cut a throat." **13,037**

368 GIUSEPPE GARIBALDI (1807–1882) *unifier of Italy*

What a life! Banished as a rebel to Latin America, Garibaldi fought as a pirate in a Brazilian civil war. During the conflict he spied a beautiful girl on a hillside through his ship's telescope and sailed away with her forty-eight hours later. Back in Italy he fought with such ferocity against the Austrians and French to free his homeland that he became known as "the hero of two worlds." In his great campaign of 1860 against Sicily and Naples, he triumphed against impossible odds with his mythical "thousand men," and the following year the Kingdom of Italy was born. Abraham Lincoln (32) tried without success to recruit Garibaldi as a major general in the American Civil War. The most charismatic of the triumvirate of Italian liberators, Garibaldi has been claimed by every conceivable political movement

of the twentieth century. During the cold war he was the only historical figure to appear on both American and Soviet postage stamps. **13,019**

369 JEAN PIAGET (1896-1980) *reader of the juvenile mind*

We know that the Swiss psychologist Piaget is pivotal to understanding early childhood development, but he's so hard to comprehend—even in English—that scholars have built their careers on trying to simplify his ideas for educators and parents. We'll do our best: Thinking comes before language; and knowledge is learned, not inherited, by children through their environments. The bottom line to Piaget's revolutionary theories: Adults need to foster children's development from the earliest stages. Although Piaget first studied zoology and wrote a dissertation about mollusks, he was moved to analyze infant behavior. He observed his own children and others before concluding that normal children pass through four stages of development—from the reflex stage of crying and sucking, to rudimentary thought processes, to an understanding of abstract concepts, and finally to analytical thinking. A child prodigy himself, he published his first scientific article at age eleven. **13,003**

370 TOKUGAWA IYASU (1543-1616) *founder of a 254-year Japanese dynasty*

Feudalism in every country is like a Mafia organization, and so it was in Japan. The warlords lived by a treacherous code based on family connections, violence, and honor—except that they didn't have to worry about the police. They were the police. From the age of four to six Iyasu was a hostage to his samurai father's enemies. By twelve he was an experienced fighter, and at seventeen he was the head of his family.

Almost forty battles later he had conquered Japan, establishing the Tokugawa line of shoguns that ruled until 1867. Although he approved of trading with the West early in his reign, he realized that the openness that accompanied commerce would undermine feudal rule, and he instituted restrictions that led to more than two centuries of Japanese isolation. **13,000**

371 ULYSSES S. GRANT (1822-1885) *Civil War victor*

Grant said he attended West Point for an education, not a military career. He distinguished himself in the Mexican War and other campaigns, however, making captain before leaving the army in 1854. A failure at farming and real estate, he was saved by the Civil War. The career of this plain, quiet, but determined man proved meteoric. Because of his astute leadership, he shot from regiment colonel to brigadier general, then general of all United States armies in three years. But adversary Robert E. Lee (515) had only disdain for Grant. "His talent and strategy consists in accumulating overwhelming numbers," Lee wrote. Exactly—that's why Grant beat Lee and won the conflict. He taught generals of all nations how to win wars of attrition. Grant forced Lee's surrender in April 1865 and, three years later, was elected president. His career was far from illustrious; his second term was marred by political scandals. But he deserves credit for supporting amnesty for Confederate leaders and protection of blacks' civil rights. **12,956**

372 LOUISA MAY ALCOTT (1832-1888) *enduring American author*

If you want to know about Alcott, read *Little Women* with attention to the assertive Jo March. Alcott's classic about four impoverished but gen-
tified sisters was autobiographical fiction that

she said “simmered” for years in her mind. Her first story, which she called “great rubbish,” was written when she was sixteen. For ten years she supported her family on macabre, risqué “blood and thunder” stories with plots about opium parties and murder. It wasn’t great literature, but as Alcott observed, it “paid the butcher’s bill.” In four months in 1868 she dashed off *Little Women*, a favorite among preteen girls that has remained in print ever since. It was so successful that Alcott continued the saga through *Little Men* and *Jo’s Boys*. Her novel *A Long Fatal Love Chase* was rejected because the tale of adultery and bigamy was too sensational, but it enjoyed great success when it was finally published in 1995. **12,954**

373 CLARENCE BIRDSEYE (1886–1956) *Frosty the chow man*

Those fishsticks in your freezer stay fresh because of this Yankee entrepreneur, who described himself as “just a guy with a very large bump of curiosity.” At age ten he hawked muskrats he captured in a park for one dollar each. In college he sold rare black rats he spotted behind a butcher shop to Columbia University for breeding experiments. But it was in Labrador in 1916, where he had taken his new bride to trap foxes in a region two hundred miles by dogsled from the nearest town, that he hit upon his brainstorm for fast-freezing food. He noticed that fish he brought up through ice holes froze almost instantly and, thawed weeks later, tasted fresh. He later applied the same principle to vegetables and mass-marketed his products in small packages. The frozen-food industry was born. **12,926**

374 DWIGHT D. EISENHOWER (1890–1969) *war hero with a winning grin*

The unemotional Eisenhower wrote in his diary on June 11, 1942, “The C/S says I’m the guy.”

U.S. Army chief of staff George Marshall (344) had chosen him to command the forces that would attack Nazi Germany in Western Europe. Until then Eisenhower was unknown outside the army, but in its chummy upper ranks he was appreciated for his planning skills. While other Allied generals led the troops that did the killing, Eisenhower kept the egomaniacal generals like American George Patton and British Bernard Montgomery from killing each other. He directed the D-Day invasion of Normandy and the conquest of Germany and rode his fame to the White House in 1953. Eisenhower presided over America during the feel-good 1950s, but he lacked distinction as a president—except for his unflinching enforcement of desegregation rulings that he disagreed with. We’re not complaining. Better than his successors who made big mistakes with their activism—John F. Kennedy, Lyndon Johnson, and Richard Nixon (904)—we like Ike. **12,908**

375 HENRY DAVID THOREAU (1817–1862) *America’s down-to-earth philosopher*

Most deep thinkers are a day late and a dollar short when it comes to implementing ideas. We like Thoreau because he didn’t just talk about man’s return to nature, he lived it. Thoreau and pal Ralph Waldo Emerson (504) laid down the tenets of Transcendentalism, which paid homage to nature and the individual. Emerson was cozy in his Concord, Massachusetts, home when Thoreau chopped down some trees, built a cabin on Walden Pond, and wrote about his two-year experiment. He parlayed an overnight jail visit for failing to pay his poll tax into *Civil Disobedience*, which made him the patron saint of the 1960s antiwar movement. At the time no one paid much attention: one night in prison—commuted when an unknown benefactor paid the tax—hardly seemed fodder for lofty ideals of resistance

to an unjust civil authority. Decades later, however, even India's Mohandas Gandhi (12) and civil rights leader Martin Luther King, Jr. (56), found inspiration in Thoreau's disobedience. **12,877**

376 **GEORGE P. MARSH** (1801-1882) *conservation crusader*

Marsh's lifetime of observations produced the landmark *Man and Nature* in 1864, which advanced world knowledge of resources management. Marsh was an American diplomat with more than protocol on his mind. A congressman tapped for international posts, he used his travels to observe the human impact on the natural world. In Turkey he saw how development affected the landscape around the Mediterranean. In Italy he chronicled how deforestation of alpine regions led to erosion, then landslides and floods. His mastery of languages—he spoke twenty—steered him through foreign environmental studies that bolstered his views. In his book he argued that human abuse of forests, lands, and waterways had more long-term, destructive consequences than did natural disasters. And although it's gospel today, Marsh was among the first to recognize the importance of food chains—and the ensuing harm if one link is broken. **12,871**

377 **RACHEL CARSON** (1907-1964) *our environmental conscience*

Imagine a world where spring does not come—a world with no birds, or crops, or children at play. "No witchcraft, no enemy action had silenced the rebirth of new life in this stricken world. The people had done it themselves," Carson wrote. Years before Earth Day became an annual April event, Carson's 1962 best-seller, *Silent Spring*, warned that man-made pesticides were destroying life. So potent was her message that she was condemned by the chemical industry and the

crop growers' champion, the U.S. Department of Agriculture. Yet a special committee appointed by President Kennedy supported her ominous predictions. Carson spent her early career as a writer for the U.S. Bureau of Fisheries. She once wrote an introduction to a bureau booklet that was so eloquently passionate that it was published instead in *The Atlantic Monthly*. When we traced the modern environmental movement to its roots, we found Carson lobbying on behalf of springtime. **12,844**

378 **GREGORY VII** (1020-1085) *reform pope*

An early advocate of the separation of religion and government, Gregory also insisted on the separation of priests from their concubines. (Back then, men of the cloth took wives and even shackled up with their girlfriends.) Gregory reasserted the authority of the Holy See, starting with his attack on "lay investiture," the installation of bishops and abbots by secular rulers. This led to his clash with Holy Roman emperor Henry IV (177) and the latter's famous capitulation. After crossing the Alps in the winter of 1077, Henry stood, barefoot and in sackcloth, for three nights outside the castle where Gregory was staying in Canossa, before finally gaining absolution. The standoff ignited the great struggle between church and state in medieval Europe. Gregory also attacked the sale of church offices, or simony; laid the groundwork for the doctrine of papal infallibility; and founded the College of Cardinals. Oh, yes—he also decreed clerical celibacy. **12,819**

379 **MARGARET MEAD** (1901-1978) *anthropologist with a popular touch*

As a twenty-five-year-old graduate student, Mead studied Samoan child-rearing and sex practices, spurning one villager's offer of a personal demon-

stration. In *Coming of Age in Samoa* and other writings, she taught that the ills of civilized society are cultural, not biological, and can be eliminated if people emulate primitive people. She found, for example, that the generation gap was unknown in Samoa. Mead spread wisdom on these subjects for half a century as an ethnologist at New York's Museum of Natural History and as a globe-trotting lecturer. When she turned preachy about family life, though, some critics noted she had been divorced three times; detractors said she fabricated some of her Samoan findings. And her mentors Franz Boas (741), Ruth Benedict, and France's Claude Lévi-Strauss are considered greater theoreticians. But no one surpassed Mead in efforts to help the general public apply the lessons of anthropology to modern-day living. **12,804**

380 **MENELIK II** (1844–1913) *Ethiopian emperor*

Menelik's grandfather prophesied the child would restore Ethiopia to greatness—a reasonable expectation for the namesake of the son of King Solomon of ancient Israel and Sheba, queen of south Arabia. Menelik united Ethiopia after centuries of dynastic struggles, restored religious liberty, and ushered his country into modern times. He also beat back Italy's attempt to envelop Ethiopia as part of its colonial empire. The canny Menelik marshaled a hundred thousand barefoot but well-armed warriors to crush advancing Italian forces in 1896 at Aduwa. It was the bloodiest defeat ever for a colonial power on that continent. Through it Menelik, the "King of Kings" and the "Lion of Judah," ensured that his country would not suffer the fate of the rest of Africa during the great wave of colonization. As he told Europe's leaders, "I have no intention of

being an indifferent looker-on if the distant Powers have the idea of dividing up Africa." **12,797**

381 **BILL W.** (1895–1971) *founder of Alcoholics Anonymous*

His name was Bill Wilson, and he was an alcoholic. After recovering from his own drunken odyssey with the support of other alcoholics, Bill W. articulated a twelve-step recovery program that gave drunks, as he called them, the courage to stand up in a crowded smoke-filled room and admit they had a problem. Founded in 1935 by Bill W. with the help of an Ohio physician, Dr. Bob, AA grew into a worldwide organization. Members join on a first-name-only basis that cuts across sex, class, race, and religion. AA has no dues, bylaws, or officers. Bill W. realized that giving up alcohol forever seemed impossible, but most drunks could stop drinking for just a day. The "one day at a time" approach was so successful in helping alcoholics that its group support philosophy has been applied to gambling, drug addiction, and overeating. **12,782**

382 **AGATHA CHRISTIE** (1890–1976) *the Dame whodunit*

The works of grandmotherly, tweedy Dame Agatha are the world's most read after the Bible and Shakespeare (5). Her novels, including *Murder on the Orient Express* and *Death on the Nile*, have sold more than 400 million copies. This prolific writer from an upper-class British family created two recurring characters: eccentric Belgian detective Hercule Poirot and elderly sleuth Miss Jane Marple. Ever the lady, Christie bristled when an American publisher put a nude woman on her book jacket. "There's nothing immoral in my books," she said, "only murder." Christie created ingenious fictional puzzles, and her nar-

rative skill made every story a page-turner. One mystery, though, she declined to unravel: her much-publicized disappearance in 1936. People thought it was a stunt, but Christie apparently suffered a breakdown when her husband left her. She was found in a country hotel, registered under the name of her husband's mistress. **12,781**

383 JEREMY BENTHAM (1748-1832) *philosophy's Dr. Feelgood*

He was the prime expounder of utilitarianism, which he described as "the greatest happiness of the greatest number." This formula underpinned his life's campaign for social reform. Early in his career, he said, he was disillusioned to discover that "people in power were against reform," following their "sinister interest" rather than the general good. In studying the obstructionism of the powerful, this Ben Franklin lookalike categorized their four basic tactics for quashing reforms: the "fallacies" of invoking higher authority, warning of the risks of change, delaying debate, and if all else failed, sowing confusion. Bentham's plan for a model prison, the "Panopticon," was never implemented in Britain, though penitentiaries in the United States copied it. And he loved fancy language. The writer Lucie Duff recalled how as a child she was escorted by the elderly Bentham around his garden in an activity he called "ante-prandial circumgyration." **12,777**

384 PIERRE-AUGUSTE RENOIR (1841-1919) *dishmaking's loss, the art world's gain*

While fellow impressionists preferred landscapes, Renoir became a master of figure painting. His trademark: voluptuous female nudes cavorting in streams, their skin pink and radiant. Renoir was

happy painting dishes for six francs a day, but his workshop was driven out of business by mass production. So he went to art school and met Claude Monet (196), Alfred Sisley, and Camille Pissarro and for the next dozen years went hungry producing paintings that defied conventions and lacked buyers. For dumbest landlord of the millennium, we nominate the one who discarded twenty canvases that Renoir presented in lieu of rent. Finally Renoir found an audience at the most famous art exhibit in history, the April 15, 1874, show by thirty rebel painters spurned by the stuffy jurors of the Paris art establishment. Renoir got two good reviews and sold a painting, *La Loge*, for a respectable 425 francs. He lived long enough to become a celebrated master and see his paintings in the Louvre. **12,776**

385 LORD BYRON (1788-1824) *the romantic body beautiful*

George Gordon Noel Byron was the male sex symbol of the millennium—dark, handsome, and tremendously appealing to women, whom he treated with contempt. Lamed by a clubfoot, he nevertheless exuded courage. Guilt-ridden, emotional, and defiant, he was the mold for the Byronic heroes of his writings. Byron gained fame in 1812 with publication of *Childe Harold's Pilgrimage*. But of all his works, his masterpiece was the mock epic *Don Juan*, a poetic satire of English society. A sample:

*In her first passion woman loves her lover,
In all the others all she loves is love.*

A daring adventurer who captivated Europe with his exploits, Byron died of exposure while fighting in the Greek war of independence. His legendary amours included liaisons with his half-sister, poet Shelley's (509) sister-in-law, and novelist Lady Caroline Lamb. After the affair with Lamb,

Byron warned, "Keep clear of her." She labeled him, "Mad, bad, and dangerous to know." **12,773**

386 JAMES STARLEY (1830-1881) *big wheel in bicycle history*

We faced the same problem with the bicycle that we did with the automobile, television, gun, and airplane: Sure it's important, but who the heck invented it? We could have selected Jean Theson, who invented a self-propelling machine in 1645, but his version had four wheels and in no way resembled the sporting vehicle we know today. We considered giving the nod to Baron Karl de Drais de Sauerbrun, whose contraption required riders to power it by moving their feet along the ground; or to Kirkpatrick Macmillan, whose 1839 model featured cranks, rods, and levers. Then there was Pierre Michaux, whose "velocipede" also relied on cranks. Eureka! We settled upon Starley, affectionately considered the "father" of the bicycle in England. His 1870 "penny-farthing" model had a massive front wheel but was basically similar to what we know today as the bike. **12,770**

387 JAN HUS (1372/73-1415) *the playboy who became a prophet*

As a youth, Hus was something of a gadabout, with a weakness for stylish clothing, chess, and feasts. "But when the Lord gave me knowledge of the Scriptures, I discarded from my foolish mind that kind of stupid fun-making," he said. Hus and John Wycliffe (337) were the two great medieval precursors of the Protestant Reformation. As usual, Britain proved more hospitable to dissent than the continent; Wycliffe died of a stroke while scribbling in his rectory, while the Czech Hus was burned at the stake three decades later. The irony was that while Hus approved of Wycliffe's campaign to purify the church, he

rejected most of his doctrinal challenges. "Seek the truth," he wrote in a famous prayer, and:

*Listen to the truth
Teach the truth
Love the truth
Abide by the truth
And defend the truth
Unto death.*

12,687

388 ERNEST HEMINGWAY (1899-1961) *imitated but rarely surpassed literary stylist*

Then you were young and you read *A Farewell to Arms* and *For Whom the Bell Tolls* because Hemingway wrote them and Hemingway was good. You tried to write like Hemingway but you were not Hemingway. You were a Hemingway wannabe.

"Hemingway's style taught writers the beauty of prose that is spare, simple, clean," a critic said.

"Yes," you said. "He was splendid."

Your wife did not understand. "I spit on Hemingway the obscenity. I do not care about the old man. I do not care about the sea. Hemingway was a bully and impotent," she said.

"*Tu sais rien*. You do not understand. You are a woman," you said.

Then there was Paris, and bullfights, and the Spanish Civil War, and Havana and Key West and his Nobel Prize. He posed beside fish and lions that were big and dead. In the summer he shot himself in the head. **12,653**

389 JEAN-BAPTISTE RACINE (1639-1699) *magnificent obsessive*

Racine's grandmother took the penniless orphan with her when she joined a convent at Port-Royal, and it changed his life. Port-Royal was the hotbed of Jansenism, a somber cult that leaned

toward predestination—in violation of the Catholic Church's teachings. Outstanding scholars of the day also espoused Jansenism, so Racine had first-rate teachers. At nineteen he left for Paris to study law but instead prowled the royal court, theaters, and boudoirs. His decision to become a playwright scandalized the folks back home. Racine's eleven tragedies exploring the destructiveness of obsession have remained popular in French theaters and classrooms. His lofty dramas melded the formal beauties of neoclassical structure and verse with Greek mythology. His finest works: *Phaedra* and *Iphigenia*. Racine was at the pinnacle of his career when he abruptly stopped writing plays. His biographer-son ascribed this to a religious conversion. It seems that Racine reverted to the cult of his youth, costing him the king's favor. **12,617**

390 **BERNADETTE OF LOURDES** (1844-1879) *last hope of the sick and lame*

Saint Bernadette was puny, sickly, and illiterate, yet she convinced the Catholic world that she had seen the Virgin Mary near her sleepy French town at the foot of the Pyrenees. At first, *paysans* said Marie-Bernarde Soubirous was a fool when she lapsed into ecstatic trances. At the direction of a "lady in white," the fourteen-year-old girl dug a hole and, when water sprang up, washed herself. Then a miner, blinded in an accident, washed his injured eye and regained his sight. Today millions of pilgrims trek to drink the grotto water. The streets of Lourdes are as crowded as a suburban mall the day after Thanksgiving, while local shops hawk religious souvenirs. Lourdes provided handicap access decades before government mandates. Railroad cars and ramps are designed to accommodate people on stretchers and in wheelchairs who come to Lourdes in a last-ditch, and usually fruitless, effort to find a cure. **12,604**

391 **JOHN BUNYAN** (1628-1688) *author of Pilgrim's Progress, one of the millennium's most influential books*

An allegory of the Christian journey of faith, *Pilgrim's Progress* was the most widely read religious tome in the Anglo-Saxon world after the Bible for more than two hundred years. In it the hero, Christian, sets off from the City of Destruction with a huge burden on his back to seek the Celestial City. On the way he encounters endless snares and enemies, from serpents to a horrible giant, prompting one twentieth-century book reviewer to call him the Indiana Jones of Protestant Christianity. But the nineteenth-century British scholar Benjamin Jowett placed *Pilgrim's Progress*, alongside *Arabian Nights*, *Plutarch's Lives*, and *Robinson Crusoe*, as one of four books all boys should read. Bunyan, the son of a poor English tinker, said he led a sinful life before turning to religion, "with few equals for lying and blaspheming the Holy name of God." **12,603**

392 **RICHARD FRANCIS BURTON** (1821-1890) *roamer of the last frontiers*

On a passage to India in 1853, an English civil servant spotted a fierce mustachioed man exercising on deck and exclaimed, "That Arab has an intelligent look." That Arab was the sun-blackened Burton, still in disguise from the first known trip by a non-Muslim to Mecca and Medina, the holy cities barred to infidels. Risking his life to see things no Western eyes had encountered makes this glory-seeking sometime spy, diplomat, scholar, soldier, and naturalist one of the greatest explorers of the millennium. He plunged into Amazon jungles, remote India, Afghanistan, Arabia—even Utah—and his crowning achievement was exploration of the source of the Nile River. Packing courage, cun-

ning, and knowledge of twenty-nine languages, Burton survived a Somali warrior's spear in the face and lived among cannibals in Gabon. In his spare time, he wrote best-selling translations of the *Kama Sutra* and the *Arabian Nights*. **12,599**

393 **APHRA BEHN** (1640–1689) *first Englishwoman to earn her living as a writer*

Contemporaries, scandalized that she presumed to take up the manly art of writing, and perhaps threatened by her talent, accused Behn falsely of plagiarism. One critic called her authorship "a reproach to her womanhood and a disgrace even to the licentious age in which she lived." Even today intrigue surrounds her. She served as a spy during the Anglo-Dutch War, but her warning that the Dutch planned to attack by sailing down the River Thames went unheeded. Later she was shipwrecked in the English Channel but survived, only to be incarcerated briefly in debtor's prison. She turned to writing to earn her keep and, by 1671, had two plays performed at England's Duke's Theatre. In all she wrote more than twenty plays, five novels, and numerous poems. She was buried in Westminster Abbey, proof positive that, despite her gender, she was numbered among the literary elite. **12,577**

394 **SAMUEL TAYLOR COLERIDGE** (1772–1834) *poet, philosopher, and opium eater*

We include Coleridge not because he was a junkie, of course. We include him for the power and wildness of his poetry, including his most famous work, *The Rime of the Ancient Mariner*, which makes him one of the greatest of the English romantics. Yet Coleridge's addiction tarnished his poetry, eroded his imaginative powers, damaged his marriage, soured his friendships, and has even been blamed

for his other great failing, his plagiarism. "I was seduced into the ACCURSED Habit ignorantly," he complained. It became "a slavery more dreadful than any man who has not felt its iron fetters eating into his very soul, can possibly imagine." In "The Pains of Sleep," he describes the agony of withdrawal: "Fantastic passions! maddening brawl! / And shame and terror over all!" **12,509**

395 **ENRICO FERMI** (1901–1954) *elemental physicist*

Old dictionaries defined uranium as a rare but worthless metal. Fermi helped prove how worthless those dictionaries were. Building on work by Frédéric and Irène Joliot-Curie, Fermi bombarded elements with neutrons in experiments that led to the discovery that atoms of uranium could be split. For this work he won the Nobel Prize for physics in 1938. On December 2, 1942, he led a group of U.S. government researchers who started the first nuclear chain reaction in a lab under Stagg Field in Chicago. Afterward they drank Chianti from paper cups in a joyless celebration befitting the nightmarish next step: bottling the reaction in bombs that destroyed Hiroshima and Nagasaki to end World War II. Physicist Emilio Segrè, who worked on the bomb project, too, called Fermi "the last individual of our times to reach the highest summits in both theory and experiment and to dominate all of physics." **12,502**

396 **YO FEI** (1103–1141) *Chinese military hero*

The peasant Yo Fei was a muscled wonder at age eleven. He mastered wrestling and archery but also taught himself to read and write. When Mongolian invaders threatened, Yo Fei's mother urged the twenty-year-old to lead the battle and burned "Do your best for your country" with a

hot knife into his back. Fellow officers were suspicious of this literate giant who shunned silks and robes to dress like his men. He abandoned predictable military stratagems to embrace guerrilla tactics and trained his troops as crack archers. "It is easier to pull down a mountain than defeat Yo Fei's army" went the saying among enemy soldiers. Yo Fei was made general and became a national hero, only to be done in by evil Prime Minister Ch'in Kuei. To this day, Chinese revere Yo Fei and revile Ch'in Kuei. They eat fried cakes dubbed "Yu Cha Kuei," for "Kuei has been fried in oil."

12,478

397 JAMES BOSWELL (1740-1795)
*author of the world's greatest
 biography, The Life of
 Samuel Johnson*

If there is a link between genius and lust, Boswell is exhibit A: This son of a dour Scottish Presbyterian blazed a trail of fornication across Europe, frequenting whores and seducing actresses, house servants, his friends' wives and daughters and even the mistress of his hero, the French philosopher Rousseau (19), saying she became "agitated, like a bad rider galloping downhill" in their love-making. An egotist, a celebrity hound, and a drunk, Boswell was nevertheless a charmer. Samuel Johnson (182), England's towering intellect of his age, said Boswell was "never in anyone's company who did not wish to see him again." Boswell has his detractors; Edmund Wilson called him "a vain and pushing diarist," and others have complained that he painted a crude portrait of his brilliant subject. But most critics say his eye for detail and his accounts of the intellectual give-and-take in London society are unparalleled. Historian Thomas Carlyle (691) said his prose "wondrously brought back to us" a lost era.

12,444

398 GUSTAVE FLAUBERT (1821-1880)
ultimate realist

When the novel *Madame Bovary* appeared in 1856, the Parisian authorities tried Flaubert on a charge of outraging public morals, but art won. He was acquitted, and the critics cheered. This still-popular story of a woman crushed by the tyranny of provincial society showed future novelists that pure realism could convey truth and beauty. A fanatical perfectionist in all his novels, Flaubert ripped up eight pages of every ten he wrote. He also had a weird habit of screaming himself hoarse while he scribbled, to release the demons that blocked creativity. He suffered from syphilis, violent epileptic seizures, and disgust at novelists he found to be lacking in talent. One was Harriet Beecher Stowe (457), whose *Uncle Tom's Cabin* he considered too preachy. Flaubert's credo guides all great writers: "The author in his work must be like God in the universe, present everywhere and visible nowhere."

12,431

399 JEAN-PAUL MARAT (1743-1793)
the guillotine's best friend

Second only to Robespierre (68) in France's Reign of Terror, Marat once demanded that 270,000 enemies be beheaded. His end was as grisly as the fate he decreed for others. The scene: He is soaking himself in a bathtub to assuage a skin disorder that is driving him insane with itching and is scribbling an editorial for his newspaper. He hears a woman pleading with the guard he has posted at his door to be allowed entry so she can reveal a conspiracy against him. "Let her in," he commands. Hmm. Lovely, he thinks, giving her the once-over. But she is agitated; here is a list, she declares, of your enemies, plotting against you! "They shall be guillotined," he roars, intending to impress her. At which point she draws a knife from the fold of her dress and plants it into his chest. End of itching problem.

12,430

400 **TOMÁS DE TORQUEMADA** (1420–1498)
evil grand inquisitor

In an age when most Spanish churchmen loved splendor, Torquemada's asceticism appealed to the humorless Queen Isabella (117). She gave her Dominican confessor freedom to eradicate heresy, and Torquemada and his assistants tortured thousands of suspected nonbelievers. Men who implicated others were treated with relative leniency: Their hands were *not* cut off before they were castrated, hanged, drawn and quartered, and burned.

When Torquemada recommended the expulsion of Spanish Jewry in 1492, Isabella and King Ferdinand suggested a fat ransom instead, but Torquemada got his way. "Judas sold Christ for thirty pence; and your highnesses wish to sell Him again for 300,000 ducats," he complained. Now the good news. He died from gout after months of excruciating pain. By then, though, the culture of conformity that Torquemada had done so much to foster helped Spain achieve the domestic unity required of a great world power. **12,414**

The business of America is business. So said "Silent Cal" Coolidge, the thirtieth president of the United States, in a rare burst of loquaciousness. He was right, and in this section, we pay homage to some of the great pioneers of capitalism.

What a cast of characters they are. Frederick Winslow Taylor, the world's first great efficiency expert, thrilled to productivity gains the way some men take to liquor. Management guru Peter Drucker ranked him up there with Marx, Darwin, and Freud in his influence on posterity.

Then there is John Harvey Kellogg, the doctor who hooked the world on corn flakes; J. P. Morgan, the bulbous-nosed financier who created the first billion-dollar corporation; James Buchanan Duke, the master marketer who convinced consumers that smoking was good for them; Albert Kahn, designer of the modern factory; John D. Rockefeller, oil monopolist and philanthropist; George Eastman, who framed the human race with his hand-held camera (just think: people snapped seventy *billion* photos in 1996 alone); and Walt Disney, cartoon king.

To be sure, our next group of one hundred luminaries is loaded down with the usual weight of national leaders, military men, scientists, inventors, artists, writers, musicians, and religious figures. (Yes, two popes pop up, but trust us: in the great unfolding drama of history, popes are big.) Nevertheless this is the first section to contain such a concentration of business folk, and—with a few exceptions, like Aristide Boucicaut, a Frenchman who had a lot in store for shoppers, and Jakob Fugger, a Renaissance-era moneybags—they are an American crowd.

Most of them were born in the nineteenth century and died in the twentieth. We salute them because so much of what they accomplished lives on so visibly all around us. We'd say more, but as soon as we finish our Kellogg's Raisin Bran, we're going to watch Disney's *Beauty and the Beast* for the fortieth time.

401 MIKHAIL BAKUNIN (1814–1876) *arch anarchist*

"The passion for destruction is creative," the Russian Bakunin declared. While Marx (14) sat in libraries, Bakunin mounted the ramparts—in Paris, Prague, and Dresden—before being seized and turned over to Czar Nicholas I. In prison, wracked by scurvy, he subsisted on sour cabbage until his teeth fell out. He escaped and fled to the United States. His famous quarrel with Marx divided Europe's revolutionary movement for years. The fussbudget Marx triumphed, but the swashbuckling Bakunin was his contemporaries' darling. "Everything about him is colossal," remarked the composer Richard Wagner (165). And poisonous. A century later American black revolutionary Eldridge Cleaver said he "fell in love" with this antibourgeois, antiliberal, anti-German, anti-Communist, anti-intellectual, anti-Christian anti-Semite. And the murderous Shining Path guerrillas of Peru and the Khmer Rouge of Cambodia owe an intellectual debt to the man who craved "the annihilation of everything." 12,411

402 BARTOLOMEU DIAS (c.1450–1500) *first European to round Africa's southern cape*

Dias is a mystery man because of Renaissance Portugal's fanatical secrecy about its explorations. We know enough to laud Dias for one of the millennium's influential voyages. A three-ship fleet under his command, with Christopher Columbus's (2) younger brother Bartolomeo among the pilots, sailed from Portugal in August 1487 and headed south. The African coast was to the east. Before Christmas they were three hundred miles farther south than any previous expedition, and on February 3, 1488, after wandering in a tempest, they sighted land. This time, though, the land was to the north, not the east.

They had rounded the Cape of Storms—later renamed by Portugal a more upbeat Cape of Good Hope—and the route to the Indies and its riches lay open for Vasco da Gama's (125) voyage of 1497. Dias was lost at sea in 1500 after exploring the coast of Brazil. 12,409

403 GIOVANNI BELLINI (c.1430–1516) *atmospheric artist*

While other artists may have known the difference between day and night, Bellini was among the first to paint it. He paid strict attention to the time of day and weather conditions and figured out how to use paint to emphasize daylight and atmosphere. His skill at creating a moment on canvas makes him one of the leading, although oft overlooked, artists of the Renaissance. His achievements are impossible to ignore in Venice itself, where tourists are left breathless by his magnificent altarpieces. Son of an artist and brother of the lesser known but accomplished Gentile Bellini, Giovanni extended his artistic influence by training the next generation of painters. He counted both Titian and Giorgione among his students. Our favorite: *Saint Francis in Ecstasy* at the Frick Collection in New York City. 12,356

404 NICHIREN (1222–1282) *Japanese seer without peer*

Unlike fellow Japanese Buddhists who tolerated other beliefs, Nichiren called those who disagreed with him liars, demons, and hypocrites. This "robust, intransigent sincerity," as scholar Martin Collcutt called it, made Nichiren an influential figure in the creation of Japanese-style Buddhism; almost twenty million people today belong to sects influenced by his teachings. More important, followers through the ages have championed his belief in Japan's preeminence in the world as well as his teachings that the way to salvation was

repeated recitation of "homage to the Lotus Sutra," *nam-myoho-renge-kyo*. He had an uncanny knack for foretelling disasters—earthquakes and plagues followed his predictions—but exile was his reward for being such a crank. He claimed in his memoirs that he escaped execution when a divine light blinded the swordsman, though in truth he was reprieved. **12,333**

405 VASLAV NIJINSKY (1890-1950) *ballet's soaring superstar*

By sixteen, Nijinsky's extraordinary talent in ballet earned him the title "eighth wonder of the world." The Russian youth joined Sergey Diaghilev's (581) Ballets Russes and fell under the master's artistic and sexual sway. Innovative Nijinsky dazzled world audiences with solos in *Le Spectre de la Rose* and *Petrushka*. Filmmaker Charlie Chaplin (795) called Nijinsky's dancing "hypnotic, godlike, his somberness suggesting moods of other worlds." Known for spectacular leaps, Nijinsky said staying aloft wasn't difficult: "You have to just go up and then pause a little up there." As choreographer, Nijinsky's avant-garde approach to *L'Après-midi d'un Faune*, and *Le Sacre du Printemps* created an audience for modern dance. In 1913 he shocked associates by marrying a Hungarian aristocrat. The spurned Diaghilev fired him. Within six years—at age twenty-nine—Nijinsky's genius was eclipsed by madness, and he was diagnosed a schizophrenic. He never rebounded. **12,321**

406 JOHN HARINGTON (c.1560-1612) *the bard of the bowl*

Indoor plumbing ranks high among the millennium's achievements, and we give Elizabethan wit John Harington credit for popularizing the need for the toilet, maybe even inventing it. Medieval and Renaissance homes, rich and poor, stank with human waste. Harington's remedy—cistern, stop

tank, lavatory-pan and seat, sluice, and sewage tank—looks like a modern toilet. More jokester than inventor, Harington put the plans in his ribald pamphlet, *The Metamorphosis of Ajax*, making the melancholy Homeric character, later shortened to "Jakes," a synonym for privy. So is John, in Harington's memory. In a sonnet advertising his invention, Harington wrote, "Sith here you see, feel, smell that his conveyance / Hath freed this noisome place of all annoyance." Some rich people installed the devices, though municipal water systems took more than two hundred years to catch up and make toilets feasible. **12,311**

407 OSMAN I (1258-1326) *founder of the Ottoman Turks*

The son of a tribal chieftain, Osman and his fellow Turkmen warriors fought skirmishes with Byzantine troops along the fringes of the vast Byzantine empire. Then he dreamed of a tree that grew from his loins, its branches casting a shadow over the world, and its leaves turned into sword blades pointing toward Constantinople, the Byzantine capital. Osman subsequently conquered several thousand square miles of Byzantine territory. Though a minor power at his death, his realm grew into one of history's greatest empires, stretching at its zenith in the sixteenth century from the gates of Vienna, through the Balkans and the Middle East and all across North Africa. While Osman could be cruel—he slew his elderly uncle with a crossbow for questioning policy—he was considered benevolent for his age, and the prayer for his successors was "May he be as good as Osman." **12,301**

408 GUIDO OF AREZZO (c.990-c.1050) *noteworthy musical theorist*

We sing Guido of Arezzo's praises for developing the prototype of musical notation so familiar

today: dots representing specific pitches marching up and down the lines and spaces of a staff. Guido called his pitches *ut, re, mi, fa, sol*. Later, *la* and *ti* came and *ut* was replaced by *do*. Thank goodness. If that famous Rodgers (841) and Hammerstein song had started with the words "*Ut* a deer, a female deer," *The Sound of Music* could have flopped. Guido's textbook, the *Micrologus*, was the top music theory book for four hundred years. Its short dedication is the source for what little we know about Guido's life: he was a monk who wrote and taught music. Few musicians today remember the *Micrologus*, but if you hum a few bars, they can play along. **12,254**

409 ANDRÉ-MARIE AMPÈRE (1775–1836) magnetic researcher

This guy was so advanced that before he was old enough to know numbers, he figured out math problems using stones and cookie crumbs. He said that by the time he was eighteen, he had learned all the math he would ever know. After a Danish scientist noticed that a compass needle jumped when it was brought in contact with electrical current, Ampère explained why. He outlined the theoretical "swimmer's rule," which described what would happen when a compass, a swimmer, and an electrical wire came together. Of course, Ampère didn't mention that a swimmer would die if placed in contact with an electrical wire. Oh well, that's a different lesson. In his most famous experiment, now replicated ad nauseam at elementary school science fairs, Ampère showed how electrical wires can behave like magnets, attracting and repelling at the poles. **12,209**

410 GEORGE WASHINGTON CARVER (1860–1943) the nutty professor

Carver, the botanist who revolutionized Southern agriculture, is best known for his research on

peanut derivatives. From childhood he loved plants and flowers. Barred by many schools because he was black, Carver was middle-aged before he graduated from college. Educator Booker T. Washington (458) lured Carver to the all-black Tuskegee Institute by offering him "the task of bringing a people from degradation, poverty and waste to full manhood." Carver's association with Tuskegee lasted nearly fifty years. But he felt his movable school was his finest achievement. Driving a wagon and mule, he took seeds, tools, and plants across Alabama, teaching sharecroppers about cross-fertilization and coaxing them to replace the nutrient-depleting King Cotton with sweet potatoes and tomatoes. On campus Carver was a familiar figure in his old wool suit, the trousers baggy at the knees from the kneeling he did to collect plant samples. But he never neglected one sartorial touch: his lapel always held a fresh flower. **12,197**

411 LEIF ERIKSSON (fl.1001) first European to set foot in the New World

Another Iclander, Bjarni Herjulfsson, sailed there first, in 986, after being blown off course on his way to Greenland, but he turned around without disembarking because the land looked "pretty useless" to him. Leif, son of Erik the Red, the Norwegian outlaw who colonized Greenland, followed Bjarni's directions and went ashore on "Vinland" in 1001. The site was probably on the northern tip of Newfoundland, where the ruins of a Norse village have been found in L'Anse aux Meadows. In any case a German crew member named Tyrk wandered off and got drunk on fermented berries—thus, perhaps, the "Vin" in Vinland—and Leif boasted back home that Vinland's rivers overflowed with salmon. In 1009 an expedition of 250 Icelanders established

another settlement, and other Vikings apparently made their way as far south as Rhode Island and Cape Cod, but the Native Americans expelled or killed them. **12,196**

412 **ROGER BACON** (c.1213–c.1292) *early experimentalist*

The English Franciscan friar would be in the top hundred if we had proof that he actually made, or even possessed, the gadgets ascribed to him: telescopes, eyeglasses, and gunpowder. We don't know much about what Bacon did, only that he said experimentation—not just revelation or the classical wisdom touted by Thomas Aquinas (8)—is a path to the truth. Bacon's fellow friars were skeptical about his experiments with chemicals and lenses, but Pope Clement IV was intrigued and gave Bacon permission to write an encyclopedia. Bacon threw in the view that science should reign supreme in education, and that or some other "suspected novelty," as they called heretical thinking then, put Bacon in prison for most of his last fourteen years. **12,188**

413 **WALLACE HUME CAROTHERS** (1896–1937) *inventor of nylon*

Those polyester leisure suits of the 1970s would never have been possible without Carothers. While he had absolutely nothing to do with curing John Travolta of his *Saturday Night Fever*, Carothers invented the first artificial, man-made fiber. Although rayon was developed first, it was made with natural products, not chemicals, and was a poor substitute for silk. Meanwhile the silk supply from Japan dwindled as the United States' relationship with that country deteriorated. Working as a chemist for Du Pont, Carothers produced strong elastic nylon threads in 1935. By 1938 nylon stockings were marketed, and Du Pont began developing industrial applica-

tions. When World War II intervened, women had to sacrifice their nylons so the fibers could be devoted to war uses, especially fabric for parachutes. Carothers never enjoyed the spoils of his invention. He lapsed into a deep depression and committed suicide just two years after he developed nylon. **12,174**

414 **FREDERICK WINSLOW TAYLOR** (1856–1915) *industrial control freak*

Taylor, the son of a wealthy lawyer, developed a theory for improving factory efficiency that essentially involved reorganizing workers' routines—down to the way they bent over—to eliminate wasted effort. "He couldn't see an idle lathe or an idle man," John Dos Passos wrote of Taylor in *U.S.A.*, his trilogy about America. "Production went to his head and thrilled his sleepless nerves like liquor or women on a Saturday night." Taylor called his system scientific management, and its influence on modern mass-production and management techniques is incalculable. He knew his innovations would infuriate workers, but he also figured the increased productivity would lead to higher wages. And he was right. Taylor's other passion was sports; at age twenty-five he won a national tennis championship, and in later years he invented a Y-shaped putter, but it didn't meet the standards of the U.S. Golf Association. **12,129**

415 **FRIEDRICH ENGELS** (1820–1895) *Karl Marx's sidekick and paymaster*

Okay, so Marx (14) was the intellectual giant of this duo. But without Engels's wealth—squeezed from the proletariat slaving away in his English textile mills—Marx might have been forced to seek gainful employment instead of railing against the capitalist system that was lining his pockets. For a while Engels sent him the occa-

sional five-pound note, a princely sum then, but when he sold out his share of the family textile business, Engels guaranteed his collaborator an annual stipend of 350 British pounds. Though preaching the coming of a communist utopia was his main shtick, Engels had time for other pursuits. He sang in a choral society, loved to go fox hunting, spoke twenty-four languages, and snacked up with an uneducated Irish working girl named Mary Burns. After she died, he snacked up with her sister Lizzy. **12,111**

416 JOHN I (1167–1216) *monarch who signed the Magna Carta*

Cited as the forerunner of the Declaration of Independence, the Magna Carta was less prized by contemporaries than by later generations. Over centuries it has become a symbol of resistance to oppression. When his barons forced John to sign the document at Runnymede in 1215, it was considered a policy statement asserting the rights of king and people and a way to redress wrongs. Its text had the first expression of due process and a stipulation that the governed be consulted before taxes are levied. John, youngest son of Henry II (359) and Eleanor of Aquitaine (420), was his father's favorite. However much Henry loved him, England did not. John was a tyrant who swept aside established rule of law, brought in foreign mercenaries, and heavily taxed and fined his subjects. Little wonder people said John "trusted no man, and no man trusted him." **12,098**

417 FERDINAND FOCH (1851–1929) *French leader of the Allied victory in World War I*

Without Foch, Europe might be united today—under the jackboot of the kaiser. Foch's mother

was a friend of Saint Bernadette (390), the woman who had a vision at Lourdes; his brother was a Jesuit; he himself attended mass daily. But a greater passion than religion drove him: his dream of recapturing the province of Alsace-Lorraine from the Germans, who had seized it in 1870. At France's War College, Foch taught that "the will to conquer sweeps all before it." After war broke out, he issued his famous report at the second battle of the Marne: "My center is giving way; my right retreats; situation excellent. I am attacking." In March 1918, with the Germans near victory, the Allies finally united their forces under a single commander—Foch. Within two weeks he reported, "The [German] wave is dying on the beach." In November the Germans capitulated. Alsace-Lorraine was won. **12,076**

418 ARISTIDE BOUCICAUT (1810–1877) *inventor of the department store*

Archaic French law had once prohibited shops from selling more than one type of merchandise or establishing set prices. So tradition was certainly against him when Boucicaut scandalized polite French society with his selling method. He opened Bon Marché as a small dry-goods store in 1838, and by midcentury it was a vast enterprise featuring many different departments and goods. Boucicaut, the son of a banker, established Bon Marché (the name means cheap) in a poor neighborhood of Paris and lured customers to his store by giving away needles and thread. He was among the first retailers to encourage browsing, established fixed prices that eliminated bartering, and slowly built a clientele by allowing customers to return merchandise. So successful was Boucicaut at his enterprise that American merchants like Macy and Woolworth toured the Paris original to glean ideas for their own ventures. **12,065**

419 CHARLES-MAURICE TALLEYRAND (1754-1838) *revolving-door duke*

The great French statesman preserved the territorial integrity of France and helped negotiate a post-Napoleonic balance of power in Europe that lasted a century. In his first vocation as a womanizing priest, the clubfooted aristocrat defended church privileges until the French Revolution loomed, then denounced them. In his later career as a bribe-taking diplomat, he abandoned French heads of state at the first whiff of danger, thereby managing to serve as foreign minister under the revolutionary regime, Napoleon (16), and the restored monarch Louis XVIII. He justified his opportunism by declaring that "after shipwrecks, there must be pilots to save the victims." When Napoleon uncovered a plot by him, the emperor shook his fist in his underling's face and vilified him as "shit in a silk stocking." Talleyrand took the abuse without flinching but afterward commented to a companion, "What a pity that such a great man should be so ill-bred." 12,019

420 ELEANOR OF AQUITAINE (c.1122-1204) *queen of two kingdoms*

In England and France the last half of the twelfth century could be called the Age of Eleanor because she used brains, beauty, and an inheritance to manipulate the government of three kings who ruled from 1137 to 1199. The first was Louis VII, whom she married, bringing her inheritance, the huge region of Aquitaine, under France's control. Then she took it back. Their marriage was annulled, and she married Henry II of England (359) and made the Aquitaine their wedding gift. They had four sons, and the romance faded. He locked her in a castle for years for meddling in affairs of state. But Henry's death put her back in business as First Mom in the kingdom of her son Richard the Lion-Hearted. It

was Eleanor—not the apocryphal Robin Hood and his Merry Men—who kept the conniving Prince John (416) from stealing Richard's realm while he was off crusading. 12,009

421 FERDINAND DE LESSEPS (1805-1894) *ditchdigger—but what a ditch!*

Lesseps was the mastermind of the Suez Canal. At age forty-four his career fizzled. A distinguished diplomat, he had resigned in disgust from French public service after the government blamed him for a zealous general's takeover of Rome. Idleness allowed de Lesseps to pursue a dream he had shaped years before as consul in Cairo: construction of a canal across the hundred-mile Isthmus of Suez, connecting the Mediterranean and Red seas to open the shortest sea route between Europe and the Indian and western Pacific oceans. It took ten long years of battling engineering problems and shoring up shaky international support, but de Lesseps's charm and chicanery finally triumphed. When the canal opened in 1869 amid fanfare and fireworks, the first flotilla sailed past. One observer said: "There was something solemn and imposing about this group of vessels, surrounded by desert, anchored on an artificial lake created by the genius of one man." 12,008

422 YUNG-LO (1363-1424) *the Ming dynasty's brilliant ruler*

The word *ming* means "brilliant," but before Yung-lo could show his brilliance, he had to establish his authority. He was born Chu Ti, the lowly fourth son of the first Ming ruler, Chu Yüan-chang. Called the Prince of Yen, Yung-lo was popular in North China, where his troops guarded the borders. His nephew succeeded Chu Yüan-chang as emperor, but Yung-lo justified insurrection by arguing that the youth had been led astray by cor-

rupt advisers. The three-year civil war ended when the nephew died in a fire and Yung-lo became emperor by default. He moved the capital from Nanking to Beijing in 1407 and reconstructed the Grand Canal so ships could navigate inland. He extended Chinese borders beyond the Great Wall into the Gobi Desert and, nearly a century before Europe's great explorations, sent his loyal eunuch, Cheng Ho, on sea expeditions throughout the east, as far south as Africa. **12,001**

423 GUSTAVUS ADOLPHUS OF SWEDEN (1594–1632) *father of the modern professional army*

Gustav inherited three wars and concluded them by making peace with Denmark, beating back Russia from the Baltic (and thus delaying its emergence as a European power for a century), and fighting Poland to a draw. More important, the Swedish monarch entered the Thirty Years' War on the side of the Protestant princes of Germany and their allies against the forces of the Counter-Reformation, delivering Europe from Catholic domination. Gustavus instituted a highly disciplined, professional army organized into squadrons and brigades, and he actually paid his soldiers on time. These and other innovations enabled him to sweep victorious through Germany, gaining the title of "Lion of the North." But on November 6, 1632, leading a cavalry charge on a mist-shrouded battlefield, Gustavus was separated from his men, knocked from his horse into the mud, and shot through the head with a pistol. Adieu, Adolphus. **11,987**

424 FRÉDÉRIC CHOPIN (1810–1849) *the prince of the piano*

Rarely has the millennium seen a greater flowering of art in one place and time than Paris in the 1830s. Hugo (163), Balzac (254), Musset,

Delacroix (486), Ingres (926), Mendelssohn, Heine, Liszt (300), and Berlioz (671) worked and played together, and they welcomed Chopin, newly arrived from Poland in 1831. Chopin was smart. He shrugged off an offer of lessons from the great Frederick Kalkbrenner (the great who?) and cozied up to Baron Rothschild, whose rich friends left coins discreetly on mantelpieces after Chopin taught their children. "A really perfect virtuoso," the sweet Felix Mendelssohn wrote of Chopin the performer. We revere Chopin the composer of short piano pieces—the waltzes, ballads, études, and mazurkas. So often heard, they are as familiar as the whistling of the wind. He died of tuberculosis, spurned at the end by his former lover, the intriguing woman with a man's pen name, novelist George Sand. **11,944**

425 ALESSANDRO VOLTA (1745–1827) *inventor of the battery*

Try this. With a silver spoon connect the back of your tongue to a bit of tin on the tip of your tongue. The sour taste you get is from the electricity sparking between the two metals. You have turned your tongue into a primitive battery. Luigi Galvani (503) tried a similar experiment with the nerve and muscle of a frog's leg and thought the electricity he generated was caused by the frog. Volta proved it was the wires. He experimented with different metals, wires, and buffers and built what came to be known as the voltaic pile, the first battery. That jump-started the electrical revolution of the nineteenth century. The volt, the measure of electromagnetic force, was named for him in 1881. **11,911**

426 EUGENE O'NEILL (1888–1953) *America's greatest playwright*

O'Neill, a taciturn man whose youth was spent backstage wherever his actor-father performed,

bounced around the world, lost himself to alcohol, abandoned a wife and child, and even attempted suicide. Then he studied playwriting. His troubled childhood provided fodder to create bleak characters like the drunken riffraff in *The Iceman Cometh*. His realistic, disturbing plays established American theater as art, beyond vaudeville and melodrama. He won four Pulitzer Prizes and was the only American playwright to win the Nobel Prize for literature. O'Neill wrote his masterpiece, the autobiographical *Long Day's Journey into Night*, in 1940 but had it locked in a vault until after his death. In the foreword, O'Neill called it "this play of old sorrow, written in tears and blood." Near the end of his life, suffering from Parkinson's disease and unable to write, he became reclusive, a mirror of the tragic characters he had created in his dramas. **11,910**

427 PHILIP II OF SPAIN (1527-1598) *mightiest monarch of his age*

Philip ruled Spain at the height of its power, yet sowed the seeds of its decline. He is best known for championing the Counter-Reformation and sending his "Invincible Armada" to destruction against England. Philip executed thousands of Protestant rebels in the Netherlands and even sent soldiers to Florida to clean out the "nest of heretics" there. But more than his religious fanaticism, his bureaucratic procrastination undermined his reign. The foot-dragging reached comic proportions when he placed his empty suit of armor outside the palace to review the troops while he fussed inside over his wordy replies to urgent dispatches. Historian Barbara Tuchman called him "the surpassing woodenhead of all sovereigns." Yet under him Spain's literary Golden Age began. And his passel of wives included a Portuguese princess, Bloody Mary of England, and the daughters of a French king and an Austrian emperor. **11,893**

428 MATHEW BRADY (1823-1896) *photography's first witness to war*

Brady and his staff captured the Civil War on film, marking the first time a major conflict was so fully documented by camera. It all started when Brady learned how to make daguerreotypes and opened a Broadway studio in 1844. He envisioned himself as the "instrument chosen to express the American spirit," said biographer Philip Kunhardt, Jr. Presidents posed willingly, putting up with long periods of remaining still, a metal brace immobilizing their necks and heads, because they knew the publicity value of a Brady photo. When civil war broke out, Brady turned delivery wagons into darkrooms, and he and employees shadowed Union troops, capturing the quiet of camp life and the gruesome corpse-strewn battlefields. Brady invested \$100,000 in the project and was ruined when the government failed to buy his photos afterward. Deeply in debt and hounded by creditors, he died an alcoholic in a charity ward. The collection is now housed in the Library of Congress. **11,844**

429 LEON TROTSKY (1879-1940) *fiery Russian revolutionary*

On an October morning in 1902, Trotsky rapped three times on the door of a London flat. "The Pen has arrived," Vladimir Lenin's (41) wife announced. So met the two most influential Russian revolutionaries of modern times, Lenin, the exiled grand strategist, and Trotsky, the Jewish-born wordsmith and rabble-rouser who had escaped from a Siberian penal colony. In 1917, after years of planning and conniving—sometimes in different factions—they established the Soviet state. It was Trotsky who performed the hardest task: leading the armies that defeated the czarist generals. At his hour of triumph he told a liberal opponent: "You are miserable bankrupts, your role is played out; go where

you ought to be: into the dustbin of history." Today Marxism is played out. Trotsky, stripped of power by Stalin in 1926, was murdered in Mexico by an assassin with an ice pick. **11,793**

430 JOHN HARVEY KELLOGG (1852-1943) *champion of breakfast*

How do you spell breakfast? For millions of Americans who grew up on television, it's "K-E-double L-O-double good, Kellogg's best to you." Dr. Kellogg's vegetarian regimen at his health sanitarium in Battle Creek, Michigan, couldn't accommodate eggs over easy, bacon, and sausage. He started serving little flakes of corn for breakfast. They were an instant success, even though his flaked wheat—Granose—didn't make it as the breakfast of champions. Will Keith (W. K.) Kellogg toiled under his brother's thumb at the clinic for years, then formed his own company in 1906 to market John Harvey's cornflakes. Back at the sanitarium, patient C. W. Post was so taken with the breakfasts that he formed a competing cereal company. But it was John Harvey's healthier idea that put the snap, crackle, and pop into breakfast. **11,719**

431 KONRAD ADENAUER (1876-1967) *the man who made Germany respectable again*

As mayor of Cologne when the Nazis came to power, Adenauer refused to greet Hitler (20) and was dismissed and subsequently imprisoned three times during World War II. As chancellor from 1949 to 1963, he presided over West Germany's economic rebirth and its integration into Western Europe. A Roman Catholic from the Rhineland, he distrusted the Protestant Prussians and their militaristic mentality, muttering as he headed east across the River Elbe on trips to Berlin, "Now we enter Asia." Adenauer supported the Atlantic alliance and fought attempts to neutralize Ger-

many. His realism bordered at times on unscrupulousness, prompting one rival to quip that the aging chancellor had read a version of Machiavelli (40) edited by Ignatius Loyola (115). Franz-Josef Strauss, a powerful German politician, once exploded, "Herr Chancellor, we have not come here to say 'Yes' and 'Amen' to all that you say." Adenauer retorted, "'Yes' will be quite sufficient." **11,718**

432 MICHEL DE MONTAIGNE (1533-1592) *permissive essayist*

The essay form that Montaigne perfected has been useful for thinkers as diverse as the bearded sage Martin Buber (723) and the bemusing comic Dave Barry. Montaigne also contributed a compelling message: There is no absolute morality, only the morality in the eye of the beholder, which makes a cannibal as worthy as a curly-wigged duke. "The world is but a perennial movement," Montaigne wrote. He received the best education his French aristocrat father could afford and became a lawyer and government official. But he spent most of his time in his study writing things that were pithy, witty, and wise. When he was elected mayor of Bordeaux in 1581, Montaigne said, "We offer our blood and sweat." Winston Churchill (38), who added "toil and tears" to his speech accepting British leadership in World War II, was just one of many writers who stole lines from Montaigne. **11,676**

433 JEAN MONNET (1888-1979) *uncommon visionary of the Common Market*

For two millennia tyrants failed to do it with guns, swords, and elephants; Monnet used coal, steel, butter, and wine to bring nations of Europe together peacefully. A Frenchman from Cognac, Monnet advocated Allied economic cooperation during World War I, then served in the ill-fated League of Nations. His vision of a united Euro-

pean Coal and Steel Community stemmed from a desperate need to pool dwindling resources after World War II. From there came the Brussels-based Common Market, now the fifteen-nation European Union, which has its own passport and a planned single currency for the new millennium. Monnet, a talented negotiator one-on-one with adversaries, was so secretive that his office had two doors—one to show people in and another to usher them out. A witness to the near-destruction of Europe in two wars, Monnet believed "the greatest risk of all would be to do nothing and change nothing." **11,671**

434 **JEAN-FRANÇOIS BOREL** (b. 1934) *wonder drug maker*

Borel, an immunologist at the Swiss company Sandoz Pharmaceuticals, made a life-saving discovery in 1970. Soil from Norway yielded a previously unknown fungus, *Tolypocladium inflatum*. Sandoz technicians cultured it in hopes of producing a medicine to fight fungus infections. Borel noticed this new substance, called cyclosporine, could kill lymphocytes—the cells our bodies summon to attack foreign cells—on a selective basis without destroying surrounding tissue. It was a miracle breakthrough for the fledgling arena of organ transplants, where a patient's immune system could prove fatal to a donated liver, heart, lung, or kidney. But this wonder drug also threatened cancer and kidney damage. Eventually that risk was lowered when doctors mixed cyclosporine in a "cocktail" with other drugs. Cyclosporine won federal approval in 1983, and since then one-year survival rates for transplant patients have soared from 50 to 90 percent. **11,669**

435 **JOHN PIERPONT MORGAN** (1837-1913) *the wizard of Wall Street*

J. P. Morgan financed the industrialization of the

United States after the Civil War, hobnobbing with presidents and kings along the way. First speculating in gold and arms, he later dominated the railroads and created industrial trusts. In 1901 he put together United States Steel, the world's first billion-dollar corporation. John Gates, owner of a steel company Morgan coveted, commented on losing a huge poker pot, "I'll put it on Old Livernose's bill," a reference to Morgan's bulbous schnozzle. So vast was Morgan's wealth that he singlehandedly saved the U.S. Treasury from collapse in 1895 and halted a Wall Street panic in 1907. A legendary womanizer, Morgan also made wrong calls, once rejecting an offer to buy General Motors for \$500,000. **11,653**

436 **HENRY MAUDSLAY** (1771-1831) *the lord of the lathe*

The only thing more important to the Industrial Revolution than machines were the machines that made machines, and Maudslay built both. The best of his inventions was a metal lathe that cut screws quicker and more precisely than the screws made by hand. That makes Maudslay the father of the nuts and bolts industry. The shop he built in 1798 to make pulley blocks for the royal dockyards—some of the blocks were still in use in World War II—was one of the world's first automated factories. Ten laborers replaced a hundred skilled craftsmen. From his first job in a bullet factory at age twelve to the day he died and was buried in a cast-iron coffin, Maudslay was a happy man when he was in his shop tinkering. **11,644**

437 **WOODROW WILSON** (1856-1924) *president with a pointed plan for ending war*

Wilson, president of Princeton University turned New Jersey governor, won the 1912 Democratic nomination for president on the forty-sixth bal-

lot. Then he was elected to his first term without a majority in a three-way race. Many of his social welfare programs and financial reforms, like the Federal Reserve System, provided the roots for the New Deal of Franklin Roosevelt. Wilson ran for his second term on a "read my lips" campaign doozy: "He kept us out of war." Not for long. Wilson led America's better-late-than-never effort in World War I, negotiated the Treaty of Versailles, then suffered a tremendous blow when Congress rejected his fledgling League of Nations peace plan. The idea was resurrected, and Wilson's fourteen-point plan vindicated, when the United Nations rose out of World War II's ruins. But in 1919 Wilson couldn't have predicted that, and the stress of the presidency cost him his health. Wilson suffered a stroke so debilitating that his doctors and his second wife, Edith, secretly acted as president for three months until he recovered sufficiently to finish his term. **11,601**

438 **LI HUNG-CHANG** (1823–1901) *leading Chinese statesman of the nineteenth century*

As head of China's central province, Li began to modernize his nation militarily to guard against Western and Japanese encroachments. He built three Western-style arsenals and established a railroad, telegraph line, and modern naval bases, the first steps on the road to Chinese modernization. As China's chief negotiator with outside powers, his abiding philosophy was "Let us use the foreigner, but do not let him use us." Westerners soon found he had not one but ten faces. "He united the traits of cordial philanthropy and heartless cruelty, of truthfulness and mendacity," said American John Foster, Li's assistant at peace talks with the Japanese in 1895. To his credit, Li was a staunch patriot. He took the bullet of a Japanese fanatic during those negotiations. That

loss of face for the Japanese forced them to soften their humiliating peace terms. **11,579**

439 **JOHN III OF PORTUGAL** (1502–1557) *imperialist and persecutor*

Amazingly for a nation the size of present-day Maine, Portugal under John III projected its sea power to the far reaches of the globe. In a single decade beginning in 1529, it gained control of the Spice Islands in Indonesia, settled Brazil, conquered the city of Diu in India, and established a colony in Macao, China. At home most of the king's energies were directed at persecuting the hapless third or so of the population suspected of being tainted with Jewish blood. Though early in his reign John hired a disciple of the Dutch humanist Erasmus as his court chronicler, he turned increasingly orthodox in religion as the hated Lutheranism spread. In 1536 he instituted the Inquisition in Portugal, primarily to destroy any vestiges of the Jewish faith among the descendants of forced converts to Christianity. **11,574**

440 **JOSEPH MONIER** (1823–1906) *gardener with a concrete idea*

The Frenchman made concrete planters for orange trees and had the bright idea of making the concrete stronger by forming it around iron rods. Voilà—reinforced concrete, now one of the most popular materials for buildings, bridges, and roads. Concrete had always been a bulwark against compressive forces; Monier's rods prevented crumbling and added the tensile strength needed for large structures that swayed. He patented his idea in 1867 and built a fifty-foot-diameter reservoir with his new product. Within twenty years the formula was known throughout Europe by its German name, *Das System Monier*. It revolutionized architecture. Some of the most

stunning buildings in the world, such as the TWA terminal at Kennedy Airport, are made of reinforced concrete, and some of the ugliest are, too, like the grim housing developments of Eastern Europe. **11,540**

441 VIRGINIA WOOLF (1882-1941) *modern literature's lighthouse*

Woolf shed the trappings of the traditional novel to recapture, she said, the "essence" of life. She used stream of consciousness and interior monologues to put readers in her characters' minds. Her impressionist style and her struggle to describe the relationship between feminism and writing make her work beacons to readers of twentieth-century literature, particularly women. Her finest works: *To the Lighthouse*, *The Waves*, and *Mrs. Dalloway*. Woolf's quick intelligence made her the center of the famed Bloomsbury group, intellectuals who included John Maynard Keynes (201), T. S. Eliot (720), and Lytton Strachey. Her niece, painter Angelica Garnett, described Woolf's personality as "a diamond stream of water, hard and scintillating, transparent, bubbling, austere and life-giving." Woolf, who battled insanity throughout her life, drowned herself in fear that another breakdown was near. We now understand her illness: contrary to popular images of her "idyllic" Victorian childhood, Woolf was sexually abused for years by her stepbrothers. **11,529**

442 JACKIE ROBINSON (1919-1972) *athlete who changed the color of sports*

When Brooklyn Dodger president Branch Rickey decided to integrate baseball after World War II, he knew he needed a black superman with unbelievable athletic credentials who had "guts enough not to fight back" against ver-

bal abuse and worse. He picked Robinson, a formidable four-sport college athlete, veteran of World War II, and star of the Negro League's Kansas City Monarchs. Despite jeers, threats, and segregation from teammates on the road, Robinson began a ten-year career with the Dodgers in 1947. The pressure was tremendous for this one-man traveling civil rights movement. When Boston fans taunted shortstop Pee Wee Reese for playing with Robinson, Reese sauntered over to second base, put his hand on Robinson's shoulder, and chatted quietly with him to show solidarity. The fans shut up. After Brooklyn won the National League pennant that first season, Robinson was named Rookie of the Year, and American sports, indeed America, was never the same. **11,522**

443 JAMES BUCHANAN DUKE (1856-1925) *cancer-stick king*

The world's addiction to tobacco goes back to Columbus's (2) encounter with the peace pipe, but it was "Buck" Duke, the southern farm boy, who mass-marketed cigarettes. At age nine he wandered the North Carolina countryside with his father and two blind mules, peddling home-made chewing tobacco. Two decades later their business was using the latest technology to churn out 120,000 prerolled cigarettes a day. By slashing prices from a dime to a nickel for a pack of ten, inventing snappy brand names, designing colorful packages, and using promotional gimmicks—from coupons redeemable for picture cards of "sporting girls" to massive billboard and newspaper advertising—Buck turned his American Tobacco Company into a colossus that sucked up competitors and controlled half the national market by 1889. The company was broken up in 1911 on antitrust grounds. But by then America was hooked. **11,511**

444 JOHN ROEBLING (1806–1869) suspension bridge builder

The philosopher G.W.F. Hegel (59) was one of his teachers at Berlin's Royal Polytechnic School, but Roebling cared less for cyclical theories of history than cylindrical strands of steel. He invented a process to bind wire rope into thick cables for the suspension bridges he built across the mighty rivers of his adopted America. Roebling bridges spanned the Ohio, the Monongahela, and the Niagara before he designed his masterpiece, the Brooklyn Bridge. In its time it was America's greatest construction feat, a symbol of the nation's preeminence in engineering. The four cables holding up the bridge have a combined strength of 180 million pounds, and every builder of suspension bridges from Australia to Zaire has studied Roebling's work as intensely as military cadets study the campaigns of Napoleon (16). Roebling's foot was crushed in an accident during construction of the bridge, and he died of tetanus before it was finished in 1883 under the direction of his son. **11,508**

445 ALAN TURING (1912–1954) code-cracking computer theorist

"On Computable Numbers," a paper written when Turing was just twenty-five, ushered in the age of digital computers by figuring out how to make machines "think." Turing also masterminded the British Intelligence team in World War II that cracked the German "Enigma" codes, which provided Allies with knowledge of Germany's land and sea movements and helped secure victory. It was a nice piece of work: Germany's encoding machine provided 403,291,461,126,605,635,584,000,000 alphabet combinations. One of the first messages decoded with the British "Bombe" came from the German U-Boat admiral to his captains and ended with the ominous command: "Defeat

England." Afterward, Turing applied himself to automated computers and described "artificial intelligence." He suggested that machines could think like people if they were equipped with a random factor similar to a roulette wheel. When Turing's homosexuality was discovered, he was forced to undergo a "cure" or face prison. Instead he committed suicide by snacking on a cyanide-coated apple. **11,489**

446 LOUIS LUMIÈRE (1864–1948) innovator in motion

Brothers Louis and Auguste Lumière presented the world's first projected motion picture on December 28, 1895. At one franc per head, Parisians filled a hundred chairs in a basement below the Grand Café, Hotel Scribe, and watched the twenty-minute "Workers Leaving the Lumière Factory." *Fantastique*. The images on the screen were generated by a hand-cranked apparatus moving at sixteen frames per second. The Lumières' Cinématographe was both projector and camera, and light enough to carry. This device set the standard for movie-making for years. Louis deserves top billing because he alone created a new brand of photographic plate that enriched the family business, making it financially feasible for the Lumières to experiment with film. Also, Louis dispatched sales reps not just to sell Lumière cameras and movies but to film new scenes that would add to the brothers' inventory. **11,466**

447 VINCENT OF BEAUVAIS (1190–1264) chronicler of knowledge

Vincent, a French Dominican priest, synthesized ancient and medieval knowledge in eighty books, the *Speculum Majus* or *Great Mirror*. Widely considered the greatest encyclopedia until the eighteenth century, *Speculum Majus* covered the history of the world from the biblical cre-

ation to Vincent's own time, helping to set the stage for the explosion of learning known as the Renaissance. Among future authors who drew on it were Geoffrey Chaucer (62) in the late 1300s and Sir Walter Raleigh (472) in his *History of the World*, published in 1614. **11,465**

448 HENRY CAVENDISH (1731-1810) scientist whose genius spoke for itself

Legend says that the neurotically shy Cavendish spoke fewer words in his lifetime than any other man who lived eighty years. He left his London home and laboratory only to attend the Royal Society Club, but when he was approached there once by a noted physician eager to meet the famous scientist, Cavendish fled in terror. He communicated to his servants with notes. Cavendish's work, including the discovery that water is a compound of oxygen and the mysterious gas we now call hydrogen, helped early nineteenth-century scientists discover the chemical and physical properties of matter. He was the first scientist to measure gravitational forces between small bodies, which led to extrapolations of the weight of the planets. Some of his scientific methods were crude: to study electric currents, he shocked himself. **11,438**

449 GABRIELE FALLOPPIO (1523-1562) tube tracker

Fallopio described the tube in the ear. Just kidding—we wanted to see if you were paying attention. Actually, Fallopio's pal, Bartolommeo Eustachio, takes credit for the ear. Fallopio, a pioneer in the systematic study of the human body, analyzed blood vessels, kidneys, and—okay, okay—female anatomy. He described female reproductive organs, including the trumpet-shaped fallopian tubes that bear his name. He created the term

vagina and explained how the thin membrane called a hymen covers the vagina of a virgin. Fallopio turned to anatomy because he was such a failure as a surgeon that he had trouble keeping patients alive. He studied the writings of Vesalius (234), then dissected dead lions at the Medici zoo in Florence. He began describing human anatomy based on dissections of the corpses of men, women, fetuses, newborns, and young children. Although he was falsely accused of working on living creatures, he became a university lecturer of great stature and taught other luminaries who further unraveled the mysteries of human anatomy. **11,422**

450 JOHN GORRIE (1803-1855) Mr. Cool

Yes, some historians will note that other nineteenth-century tinkers helped develop modern refrigeration, but to them we say: Chill out! Gorrie got there first. As a physician in Apalachicola, Florida, he invented an air-conditioner for fever patients and by 1844 was cooling two hospital rooms and his own home with it. The apparatus, which employed the basic cooling principle still used in most refrigerators, also made ice. For all his technical wizardry, Gorrie was unable to raise money for a factory to build his invention. So hostile were religious folk in those days to artificial refrigeration that he wrote on the subject under a pseudonym, plaintively declaring that it could "become accessory to the extension of commerce." *The New York Globe* was unimpressed. "There is a crank down in Florida," the newspaper snorted, "that thinks he can make ice by his machine as good as God Almighty." **11,407**

451 WASSILY KANDINSKY (1866-1944) the Jerry Seinfeld of art

Like the television comedian's sitcom, Kandinsky's art was about nothing. Picasso (149) was pre-

occupied with abstracting inanimate objects and the human form when Kandinsky took painting to new levels with *Composition I*, considered to be the first completely abstract painting. Finished in 1910, it was inspired by music and depicted no recognizable objects. The Russian Kandinsky moved to Munich, mingled with German expressionists, and helped form the Blue Rider group. He exerted influence on contemporary art as a teacher and theorist at the famed Bauhaus school from 1922 to 1933. "The observer must learn to look at the picture as a graphic representation of a *mood* and not as a representation of objects," Kandinsky wrote. He hawked his paintings with an audacious lack of subject matter to well-to-do trendy Americans. When one American commissioned four Kandinskys for his apartment, another noted it required "a good deal of courage" to hang such modern paintings "in a place where everybody must see them." **11,399**

452 **GEORGE III** (1738–1820) *the king who lost America and helped Britain find itself*

Master propagandists that they were, the rebel leaders of America demonized the English king George. They said in the Declaration of Independence, "A Prince, whose character is thus marked by every act which may define a Tyrant, is unfit to be the ruler of a free people." Tyrant? Not really. George makes our list because he lacked the vision to realize that conciliation might have kept America in the empire. "The idea that he was a dunce dies harder than the old notion that he wished to be a despot," biographer Stanley Ayling wrote in praise of George's love of learning. Yes, he lost the colonies, and yes, dementia caused by a metabolic imbalance called porphyria made him insane for long periods. But for most of his sixty-year reign, George helped provide the stability

that allowed pastoral England to move peacefully into the industrial age. **11,349**

453 **HEINRICH HERTZ** (1857–1894) *the wave of the future*

The Scot James Clerk Maxwell (205) theorized that radio waves existed, and Hertz, a German, proved him right in experiments in the late 1880s. Without Hertz's work, Guglielmo Marconi (95) could not have built the transmitters and receivers that made radio possible. Hertz was an all-around genius, tops in his high-school class in Greek, a student of Arabic, and a skillful draftsman and mathematician. In his honor radio frequencies are measured in hertz; that's what those numbers on the radio dial signify. He died of a blood disease at age thirty-six. **11,348**

454 **GERTRUDE ELION** (b. 1918) *pathfinder in drug research*

A star in biochemistry without the requisite doctorate, American Trudy Elion revolutionized the way drugs are developed. And during her long years of research, she never forgot that her mission was curing people. With collaborator George Hitchings at the drug firm Burroughs Wellcome, Elion studied normal and abnormal cells, then created drugs to interrupt the reproductive process in maverick cells while leaving healthy ones alone. In 1950 she synthesized 6-MP, a compound that, combined with other drugs, has boosted survival rates for leukemia to eighty percent. She also developed acyclovir, the first antiviral drug, which fights herpes viruses. Though she had retired by the time her team created the successful AIDS drug AZT, her colleagues used all her painstaking experimental techniques. In 1988 she received the Nobel Prize. "It's very nice," she said upon hearing the news, "but that's not what it's all about." **11,344**

455 CHIANG KAI-SHEK (1887-1975) *America's bad bet in China*

Heir to the revolutionary leader Sun Yat-sen (290), Chiang headed the Nationalist government of China from 1928 until he lost the civil war to Mao's (50) Communists and was driven to exile on Taiwan in 1949. From then on he was a thorn in Beijing's side, threatening to retake the mainland and building up an economy that was the envy of the developing world. The political right in the United States never forgave Harry Truman (485) for abandoning Chiang in 1949, but the American president claimed that the ineptness and corruption of Chiang's regime gave him no choice. "I bet on a bad horse," he said. The United States, however, supported Taiwan with economic aid and a defense treaty, until Nixon's (904) rapprochement with China led to a break in diplomatic relations in 1979.

11,340

456 IBN AL-HAYTHAM (965-1039) *a lens on Arab learning*

Many people know that the Crusades stimulated European contacts with the works of brilliant Muslims who had preserved and expanded classical learning. But few have any idea who those Muslims were. Here's one: Ibn al-Haytham, known in Western Europe as Alhazen. His book *Treasury of Optics*, available in Latin translations after the thirteenth century, provided a theoretical foundation for European lens crafters. He taught that light emanates in a straight line from every point on a luminous parabola, and he stimulated inquiry by challenging scientists to discover the law governing the refraction of light. The question, known in the West as "Alhazen's problem," was finally solved by Dutchman Willebrord Snell in 1621. Being a copycat was another of Ibn al-Haytham's contributions: he copied works by

Euclid, Apollonius, and Ptolemy, and those manuscripts found their way west.

11,333

457 HARRIET BEECHER STOWE (1811-1896) *source of the abolitionist outcry heard 'round the world*

When Abraham Lincoln (32) met Stowe a decade after *Uncle Tom's Cabin* was published, he asked, "Is this the little woman who made this great war?" Stowe's novel, which described in great detail the harshness of slavery, spurred international outrage when it was published in 1852 and acted as a catalyst for antislavery activities. Although she had never traveled farther south than Cincinnati, Stowe said she wrote what she saw, explaining that the story came to her in visions. Condemned by Southerners but an instant best-seller, *Uncle Tom's Cabin* sold more than 300,000 copies its first year. Stowe, a member of the prominent New England Beecher family of ministers and authors, was a prolific writer whose works fill sixteen volumes. But she makes our list solely on the weight of her first novel, which forced America to confront its shameful conduct.

11,331

458 BOOKER T. WASHINGTON (1856-1915) *no Uncle Tom*

Washington, son of former slaves, was determined to get an education. He worked his way through agricultural school and studied at a seminary before being tapped to head a new college for black students at Tuskegee. In thirty-four years Washington built Tuskegee Institute from two small buildings into a sprawling campus with nearly two thousand students. Tuskegee's endowment rose to \$2 million, thanks to Washington's cordial arm-twisting of white philanthropists. He believed that vocational skills and good work habits were the keys to economic prosperity for his people, maintaining that "no

race can accomplish anything till its mind is awakened." His pacifism and emphasis on vocational education over academic skills drew criticism from black contemporaries such as W.E.B. Du Bois (204). Publicly, Washington never rocked the white world's boat. Privately, he helped fund lawsuits battling segregation and championing the right of blacks to vote. **11,327**

459 CHARLES DE GAULLE (1890–1970) *embodiment of France*

François Mauriac said of the obscure official who fled the collaborationist Vichy regime in 1940 and appealed to his compatriots from London to resist their Nazi overlords, "A madman imagined he was France, and the world believed him because it was true." De Gaulle actually declared, "I am France." Churchill (38) couldn't stand him, saying, "Of all the crosses I have to bear, the cross of Lorraine is the heaviest." Roosevelt (37) dismissed him as "a nut." Big mistake! From his triumphal march down the Champs-Élysées after the liberation of Paris, to his election as president in 1958 and his creation of the Fifth Republic, to his extrication of France from Algeria (including his plea during a 1961 crisis, "Frenchmen! Frenchwomen! Help me!"), to his independent foreign policy that included withdrawal from the Atlantic alliance, the six-foot-five general obsessively pursued his only ambition: to restore the grandeur of France. **11,326**

460 BENITO MUSSOLINI (1883–1945) *the first fascist*

Mussolini, the supreme opportunist, abandoned his youthful socialism and, in 1919, created the Fascist Party, named after the ancient Roman symbol for authority, with the slogan "Believe! Obey! Fight!" In 1922 he seized power by threatening a march on Rome by his Black Shirt followers.

"Il Duce," a former editor, then abolished freedom of the press but made the trains run on time, winning accolades abroad from the likes of Winston Churchill (38) and numerous American congressmen. "Statesmen of his ability only occur once in a century," an American biographer gushed at the time. Mussolini wasn't racist or anti-Semitic, but he earned history's damnation for allying himself with the archdemon Hitler (20) and leading his nation to defeat in World War II. Shortly before Italian partisans shot him and his mistress and hanged their bodies upside down at a gasoline station, Mussolini pondered whether he and Hitler "might not both be slightly mad." **11,311**

461 CH'IENT-LUNG (1711–1799) *emperor who lived too long for his country's good*

He is the millennium's best argument for term limits. Imperial China reached its apex in the first forty years of Ch'ien-lung's sixty-three year reign, the longest in China's recorded history. Agriculture and the arts flourished, taxes were low, the peasants were happy, and warlike tribes on the borders were subdued. Then Ch'ien-lung turned into a tax-levying, war-mongering, grumpy old tyrant. Books that offended him were burned—13,862 titles, by his advisers' count. He let the underpaid civil service slide into corruption led by his foppish imperial counselor, Ho-shen. Ch'ien-lung's successor ordered Ho-shen to kill himself and tried to reform the government, but it was too late. British imperialists were waiting in the wings and turned China's emperors into powerless puppies. **11,304**

462 FREDERICK GRANT BANTING *(1891–1941) tamer of diabetes*

Banting gets kudos for turning a killer disease into a chronic one. For years doctors diagnosed

diabetes by tasting a patient's urine for the telltale sweetness of sugar. But doctors didn't know how to treat it. Enter Banting, a Canadian, and his junior colleague Charles H. Best. Eight months after he began research in May 1921, Banting isolated insulin, the hormone that was causing all the trouble in the pancreas. He injected his serum into a fourteen-year-old boy who had failed to respond to other treatments. The insulin worked. By October 1922 insulin was marketed. When the Nobel Prize was awarded jointly to Banting and the now obscure professor who supervised the laboratory, Banting quelled controversy by splitting his prize money with Best. Today the side effects of diabetes can still kill, but Banting took the starch out of the disease that affects twelve million Americans. **11,300**

463 ALBERT KAHN (1869-1942) *creator of modern factory design*

In an era when designing a factory was considered more an engineering than an architectural challenge, Kahn stepped forward to change all that. Kahn, a Detroit industrial architect and planner, answered the summons of automaker Henry Ford (51) who considered multistory factories inefficient. Kahn developed huge single-level, steel-framed structures with walls of glass that housed all assembly processes on one floor, a factory scheme that became the norm. Leading architect for most of America's car manufacturers for three decades, Kahn designed more than a thousand projects for Ford, including the 1917 River Rouge auto plant near Detroit, one of the largest in the world. As Kahn saw it, the "avoidance of unnecessary ornamentation, simplicity, and proper respect for cost of maintenance" make for a kind of structure that, while "strictly utilitarian and functional, has distinct architectural merit." **11,206**

464 CLEMENT VII (1478-1534) *pontifex minimus*

If ever an institution needed a dynamic leader and didn't get one, it was the Catholic Church under Pope Clement VII. The world might be more Catholic today if in 1523 the cardinals had picked someone better than this ineffectual illegitimate son of a Medici banker. When he should have been healing Europe's spiritual wounds, he played politics—and did it so badly that in 1527 an army of mercenaries under a French count sacked Rome. They locked Clement in his castle, murdered a quarter of the eternal city's people, and demanded a 400,000-ducat payoff. Clement raised part of it by selling eight cardinal's seats to clergymen as unworthy as himself. Meanwhile, Protestantism was taking root in Scandinavia, Poland, England, and parts of France. England turned Protestant because the officious Clement wouldn't annul Henry VIII's (100) marriage. Surprising scruples for a pope who cooed over the bastard son he sired with a serving maid. **11,199**

465 KONSTANTIN STANISLAVSKY (1863-1938) *the plumber of actors' souls*

There's madness to his method. Stanislavsky taught actors that by casting aside inhibitions, they could reach new depths of reality and emotion in their roles. Before he articulated "method acting," he spent years in Russia theorizing about his own work. Cynical critics say he developed his acting theories to compensate for his unfortunate dearth of ability. Whatever the motivation, Stanislavsky founded the Moscow Art Theater in 1898 to teach his system, which he likened to unearthing the actor's "superconscious intuition." On a world tour Stanislavsky spread his ideas about "the Method." As he explained it, "Technique is all right so far as it goes, but . . . before

it come talent, inspiration, superconsciousness, and the living over of a part." In *On the Waterfront*, America's greatest method man, Marlon Brando, muttered, "I coudda bin a contender." Thanks to Stanislavsky, he was. **11,146**

466 FIDEL CASTRO (b. 1926) the Communist who couldn't

Castro, lawyer turned guerrilla leader, assembled a revolutionary force that fought its way to victory in Cuba in 1959. His stated intent: to free the island nation from military dictatorship. Let's revisit Cuba now. Cubans supposedly have more educational opportunities, free health care, and guaranteed employment. But the same Marxist-Leninist government won't tolerate dissent, stifles intellectuals, and through overcentralization hobbles the economy. Mismanagement is rife, production is shoddy, and shortages are common. Judging from this, Castro's main place in history will be as accessory to a tension-filled weekend in October 1962 when Soviet premier Khrushchev (619) and American president Kennedy faced off over Soviet placement of missiles on Cuban soil. Khrushchev finally blinked, and the missiles were removed. If Castro hadn't appealed for Soviet military protection amid fears of an American invasion, there wouldn't have been a crisis. It's the closest the world has come to nuclear war. **11,144**

467 PHILIP OF HESSE (1504-1567) patron of the Protestants

Without support from this German ruler, Protestant upstarts Martin Luther (3) and Huldrych Zwingli would have been crushed like acorns under the heel of Catholic emperor Charles V's (61) boot. Philip's defeat of imperial armies in 1534 was said to have done more for the Protestant cause than a thousand Lutheran books, and at Marburg he founded the first

Protestant university. He was a moral man, and that led to his downfall. Unwilling to commit adultery with his beloved, he married her in 1540 without divorcing wife number one. Luther was willing to bend the rules for a powerful patron and declared that bigamy wasn't a sin. But Philip's scandalized allies deserted him. In 1547 he was taken prisoner by Charles, and leadership of the Protestant cause that he had nurtured so well passed to other rulers. **11,132**

468 EUGÈNE DELACROIX (1798-1863) storm-struck painter

No placid pastoral scenes for Delacroix. As he explained, "The wickedness of my expression almost frightens me." The dapper Delacroix relished his reputation as a mysterious figure among French *artistes* and dipped into mythology and history to paint gory, massive, imaginative canvases. He even turned to literature to depict Shakespearean scenes from *Macbeth*, *Romeo and Juliet*, *Hamlet*, and others. Delacroix distanced himself from his subject matter because, as he wrote in his journal, "Feeling must not be expressed to the point of nausea." In addition to sweeping epics such as *Death of Sardanapalus* and *Murder of the Bishop of Liège*, Delacroix illustrated the works of writer friends Victor Hugo (163) and Alexandre Dumas (874). We've included Delacroix on our list because he represents the best of romanticism. And his novel use of color foreshadowed and influenced the impressionists of the next generation. **11,125**

469 IRVING BERLIN (1888-1989) composer of America's old favorites

Forget Barry Manilow; Irving Berlin wrote the songs that made the whole world sing. Ironical but true: A Russian Jewish immigrant, born Israel Baline, immortalized Christmas, Easter, and just

about every American holiday in music. An early Berlin tune, "Smile and Show Your Dimple" flopped in 1917, but he resuscitated it sixteen years later with new lyrics that left everyone humming "Easter Parade." When it came time to compose a Christmas melody for the Bing Crosby and Fred Astaire movie *Holiday Inn*, Berlin dashed off "White Christmas," the nostalgic ditty that charmed homesick GIs in World War II. Berlin refused to let dance bands perform "God Bless America," an honor he reserved for the Republican Party and soprano Kate Smith, who made it her signature song. As composer Jerome Kern put it, "Irving Berlin has no place in American music. He *is* American music." **11,122**

470 **FREDERICK LAW OLNSTED** (1822-1903) *breath of fresh air for American cities*

Olmsted and British partner Calvert Vaux designed some of the greatest public oases in urban America, including Central Park in New York City and Prospect Park in Brooklyn. Solo, Olmsted did even more, creating Boston's park system and the grounds of the U.S. Capitol and the Washington Monument. "As artist, he paints with lakes and wooded slopes, with lawns and banks and forest-covered hills," said Chicago architect Daniel Burnham. Olmsted's career as landscape architect took root after stints as a topographic engineer, seaman, scientific farmer, and journalist. En route he labored successfully for the preservation of Yosemite and Niagara Falls, which led him to a role in founding the National Park Service. High-minded Olmsted saw his parks as a proving ground for democracy, mingling everyone from tenement dwellers to Fifth Avenue swells. That still holds today, only add skateboarders, bikers, and joggers to the mix. **11,121**

471 **THOMAS CRANMER** (1489-1556) *Protestant flame over England*

Cranmer, the first Protestant archbishop of Canterbury, stumbled into the role of Henry VIII's (100) ecclesiastical consultant in the murderous monarch's divorce from Catherine of Aragon (852). On voiding the marriage, he warned Henry against further cohabitation with Catherine, prompting a churchman to ask, "How did you manage not to laugh at yourself while with such judicial severity you made these threats to the king?" Instrumental in the Church of England's break with Rome, Cranmer disseminated the English Bible in churches and reformed the liturgy. Mary I, hating him for his part in her mother's divorce, had him condemned as a heretic and burned at the stake. In one of the most riveting spectacles in Protestant history, Cranmer held his hand in the flames so it would be consumed first, because it "had offended" God by signing a false recantation of his beliefs. **11,107**

472 **WALTER RALEIGH** (c.1554-1618) *the courtier who turned a queen's head and lost his own*

Raleigh showed that it is possible to live a life more dramatic and full of diverse accomplishments than any fiction writer could imagine. A war veteran and law student in his teens, he went to Queen Elizabeth's (31) court in 1581, charmed his way into her favor, became captain of her guard, fought the Spanish at sea, and organized the first, ill-fated, English colony in Virginia. He wrote blissful verse, like these lines to his incandescent wife Bess Throckmorton:

*Serena be not coy
Since we freely may enjoy
Sweet embraces, such delights
As will shorten tedious nights.*

Elizabeth's appeasement-minded successor, James I (879), beheaded Raleigh for fighting with the Spanish during an exploration of the Orinoco River of South America. James also hated Raleigh for popularizing tobacco. How awful, the king wrote, "that the sweetness of man's breath, being a gift from God, should be wilfully corrupted by this stinking smoke." **11,070**

473 **JOHN MONTAGU** (1718–1792)
*fast-food innovator,
but did he hold the mayo?*

We could be munching peanut butter and jelly montagus, but lucky for us his title was Fourth Earl of Sandwich. The story is so good, it can't be true, can it? All sources, however, point to Montagu as the earl who gave his title to fast food in 1762, about two centuries before the Big Mac and the Whopper. Montagu was so absorbed at the gaming table that he ordered up sliced meat and bread. He stuffed meat between the bread slices and—voilà!—food history! Of lesser importance but still noteworthy, Captain Cook (194) named the islands now called Hawaii after the earl because he was popular in England for supporting exploration. Since we've shared with you our favorite symphonies, oil paintings, and buildings, we may as well tell you that we have an affinity for pastrami and turkey on rye with coleslaw and Russian dressing. **11,064**

474 **CESARE BECCARIA** (1738–1794)
criminal justice reformer

Beccaria's slim volume, *An Essay on Crimes and Punishments*, attacked the criminal and penal systems and galvanized Europeans to press for reforms. The young Italian lawyer was sickened by the state of contemporary prisons. Accused were housed with hardened criminals. Men and women, young and old, were thrown into the

same filthy compounds with no bedding or sanitation. Torture was commonplace. Defendants were rarely permitted legal counsel. Punishments were cruel; even petty theft could lead to the gallows. Beccaria, who was strongly influenced by the Enlightenment and liberal philosophers such as Montaigne (432), recoiled at these conditions. He argued that the seriousness of a crime should determine the degree of punishment, and that the effectiveness of the justice system lay in the certainty of punishment, not its severity. Beccaria's call for the end of capital punishment launched abolition movements that continue today. **11,034**

475 **GREGORY IX** (1147?–1241)
instigator of the papal Inquisition

Gregory, about age eighty when elected pope in 1227, was an enlightened figure for his era, a friend of Saints Dominic (198) and Francis of Assisi (39). Kindly toward women, he approved the Order of Saint Mary Magdalene as a refuge for rehabilitated prostitutes. In 1234 he promulgated a code of canon law that twentieth-century management guru Peter Drucker (703) called the world's first "management text." Gregory expended an immense amount of time quarreling with Emperor Frederick II (480). In 1232 he appointed an inquisitor to hound heretics in Germany, and a year later he commissioned the sadistic Dominican Robert le Bougre to harass religious renegades in France. The papal Inquisition proved to be Gregory's most fateful accomplishment. Yet it was never as nasty as the Spanish Inquisition, set up by the Spanish monarchy in 1478 to root out unreconstructed Jews and Moors. **11,008**

476 **GIUSEPPE VERDI** (1813–1901)
opera boffo

Verdi's reputation among the masses has suffered from what historian Lawrence Levine calls the

"sacralization" of culture: the transformation of popular entertainment, like Verdi's music, into highbrow art that is good for you but not fun. Yet Verdi's operas are as tasty as Tuscany's finest wines: Try them—you'll like them. The snooty Milan Conservatory rejected eighteen-year-old Verdi, but he took private lessons and spent the rest of his life composing melodramatic shows with hummable tunes like the "Anvil Chorus" from *Il Trovatore* and grisly moments like the jester's-murdered-daughter-in-a-sack scene that the censors were talked out of cutting from *Rigoletto*. Verdi's rival, Richard Wagner (165), wrote that *Aida* was, "in the crucial moments, bad all the time," but paying customers have disagreed for 130 years. Verdi was so loved that when he was on his deathbed, the police detoured traffic away from his house so he could die in peace. **11,001**

477 HIROSHIGE (1797-1858) on-the-road Japanese print artist

Hiroshige was just another struggling woodblock artist until he found inspiration on a trip from his native Edo (Tokyo) to Kyoto. He joined a group bearing an annual gift of horses from the shogun to the emperor. His landscape drawings from that journey, published in 1834 as *Fifty-Three Stations of the Tokaido Road*, brought him phenomenal and instant success. Unlike traditional landscape artists, Hiroshige infused his outdoor scenes with the common people he met along the way. His work bridges classical and modern painting. Some say he was a victim of his success. His later prints lacked the depth of *Tokaido Road*—perhaps because he hurried to meet the public's demand for his works. In Japan he is considered greater than Japanese artists who are better known in the West, like Hokusai (514). Hiroshige completed about 5,400 illustrations, prints, and paintings, including a thousand diff-

erent views of his native Edo, and a thousand studies of birds and flowers. **10,954**

478 SHAH JAHAN (1592-1666) builder of the Taj Mahal

The most beautiful monument of the millennium is this memorial to a love story. Shah Jahan, the biggest spender of the extravagant Mughal emperors of India, had his minions build this mausoleum in memory of his wife, who died in childbirth. The project—on the southern bank of the Yamuna River, outside Agra—took twenty-two years to complete. Its perfectly proportioned design has a double dome and four identical facades, each with an arch rising 108 feet. The building's opalescent marble surface changes shades with the light, making it stunning from every vantage point. The man who built the Taj Mahal must have had a loving heart. Not so his next of kin. When Shah Jahan fell ill, his four sons battled each other to succeed him. The winner, Aurangzeb, promptly put his father under house arrest until his death. **10,945**

479 EMILY DICKINSON (1830-1886) virginal voice of American poetry

Dickinson lived all her life in the family home in Amherst, Massachusetts. From her youth on she attached herself to older men with whom intimacy was impossible. She fell in love with her "dearest earthly friend," the Reverend Charles Wadsworth, on hearing him preach in Philadelphia, and pined for him for decades, though seeing him only four times. Another great love/mentor, Thomas Wentworth Higginson, was blind to her genius and urged her not to publish her work. Thus only seven of her nearly eighteen hundred poems made it into print in her lifetime. In her later years she became increasingly eccentric, wearing only white and

lurking on landings while her spinster sister entertained visitors. Higginson described her "soft frightened breathless childlike voice." But that voice, in poetry that explores the themes of unconsummated love, separation, nature, a half-open door, God, death, and immortality, ripples vibrantly across the ages. **10,911**

480 **FREDERICK II OF THE HOLY ROMAN EMPIRE** (1194–1250) *the wonder of the world*

In forty years of intermittent warfare and conniving, Frederick conquered, lost, conquered, lost, and so on, chunks of his native Italy, the German empire, and the Holy Land. The significance of those fights has faded, but they had a huge impact on his contemporaries, especially the thousands butchered in his wars. His charisma prompted admirers and foes alike to call him *stupor mundi*, wonder of the world. To medievalist Norman Cantor, this handsome brawler was "a megalomaniac who considered himself beyond the ethical standards of Latin Christianity." He read philosophy, patronized Arab scholars, and kept a harem. His books about birds were masterpieces. He was excommunicated twice: once for siding with the pope's enemies in a war for northern Italy, and once for turning back from a Crusade. When he finally went to the Holy Land in 1228, he tried diplomacy for a change and took back Jerusalem for Christianity without a fight. **10,876**

481 **ANNE FRANK** (1929–1945) *the Holocaust's most famous victim*

Abel Herzberg, a survivor of Hitler's death camps, observed that the Nazis did not kill six million Jews; they murdered one Jew six million times. Frank's life in hiding, immortalized in *The Diary of Anne Frank*, gave Hitler's victims a face. Frank, her family, and four other people hid in a cramped

annex above an office in Amsterdam from July 1942 until an anonymous caller betrayed their secret to the police in August 1944. Their story—poignantly interspersed with the mundane and profound thoughts of a teenage girl as she comes of age—was chronicled in the diary Frank received on her thirteenth birthday. A month before the hiding place was uncovered, Frank wrote that she clung to her hopes for a good life "because in spite of everything I still believe that people are really good at heart." She died in the Bergen-Belsen concentration camp in March 1945. **10,832**

482 **EDGAR DEGAS** (1834–1917) *artist who was tu tu brilliant*

Other impressionists outranked him in artistry, but Degas is the guy the public loves to love. He maintained that he learned his craft by studying the techniques of the old masters. Interested in technology, he used photography to capture a subject in motion. Obsessed with both women and horses, he became noted for his scenes at the race track and the ballet. He lived a monklike existence and never married, but he played voyeur by painting women taking baths and dressing. When in advanced years he went blind, Degas used his hands to "see" what he had previously committed to the canvas and created a series of horse and baller dancer sculptures. Our favorites: *Woman in the Bath Washing Her Leg* and *Women Ironing*. **10,822**

483 **JORGE LUIS BORGES** (1899–1986) *most influential Latin American writer of the twentieth century*

John Updike said the Argentine poet, essayist, and short-story writer "proposes some sort of essential revision of literature itself." Borges's short-story masterpieces brim with apparitions, prophecies, wizards, hallucinations, literary allu-

sions, and flights into the past. But they are muscular and compelling. In "The Gospel According to Mark," a medical student stranded on a ranch with a family of primitive gauchos while away the evenings reading Mark to them. They hang on to his every word. The kicker: "They asked his blessing; then they mocked at him, spat on him. . . . The shed was without a roof; they had pulled down the beams to make the cross." The son of an Anglophile father and a mother who translated American novels into Spanish, Borges learned English before Spanish. He said the chief event in his life was reading in his father's library. **10,814**

484 **BERNARDO O'HIGGINS** (1778-1842) *Chile's founding father*

The illegitimate son of an Irish-born Spanish governor of Chile, O'Higgins grew up on the periphery of the family, unrecognized by his father. He studied in London, where he took up with Venezuelan revolutionary Francisco Miranda, who was trying to work up fervor for South American independence from Spain. O'Higgins was willing to listen. He fell in with rebels in Chile, and in scenes reminiscent of a Gabriel García Márquez novel, the upstarts skirmished with the Spanish for years. Forget the lofty sentiments of freedom they had bandied about: O'Higgins was declared supreme dictator in 1817. When O'Higgins's gestures toward social reform—including tolerance of Protestantism in an overwhelmingly Catholic country—angered aristocrats and church authorities, he was deposed and lived out the rest of his days in exile in Peru. **10,788**

485 **HARRY S. TRUMAN** (1884-1972) *cold war warrior*

Vice president just eighty-two days when Franklin Roosevelt (37) died the untested

Truman inherited the job of winning World War II and rose to the challenge, authorizing the dropping of atomic bombs on Japan to prevent huge American casualties. After the war he curtailed Soviet territorial advances by developing a containment policy, thus setting the course of foreign policy for decades. His Truman Doctrine protected Greece and Turkey from Communist domination. This honest and feisty chief executive was never swayed by the public's whimsies; he fired the insubordinate General Douglas MacArthur (600) and withstood the outcry. In 1948 the Gallup poll and others predicted that the former haberdasher from Missouri would lose the presidential race. They were dead wrong. Truman, said comedian Fred Allen, was "the first president to lose in a Gallup and win in a walk." **10,761**

486 **JOHN D. ROCKEFELLER** (1839-1937) *ruthless industrialist*

Rockefeller applied only to large companies for his first job. "I did not guess what it would be," he said of his ultimate ambition, "but I was after something big." Within fifteen years he had it; his instincts for economy and management propelled him from shipping clerk to partner in a business, then owner of an oil refinery, and finally founder of Standard Oil Company, the first major U.S. trust. The company's cutthroat competitiveness and the public's hatred for monopolies prompted Congress to pass the Sherman Antitrust Act in 1890. Rockefeller outmaneuvered it, however, by transferring the trust's properties to companies in other states. By 1913 his fortune totaled \$900 million. Rockefeller hired a publicity man to rehabilitate his tarnished image. He started giving away chunks of his massive wealth. With \$80 million, he founded the University of Chicago. And he created major philanthropic institutions that, by his

death, had received \$500 million to support the arts, education, and medical research. **10,760**

487 **GEORGE EASTMAN** (1854–1932) *first Kodak moment*

Eastman invented film and the box camera, transforming photography from a specialty of professionals who lugged around seventy pounds of equipment to a hobby for the masses. The first hand-held Kodak, a word he concocted for its punchiness, was a phenomenon in 1888. "The craze is spreading fearfully," the *Chicago Tribune* reported. In England Rudyard Kipling exclaimed, "I am amazed at the excellence of the little Kodak's work." In Gilbert (764) and Sullivan's new opera *Utopia*, two maidens sang, "To diagnose / Our modest pose / the Kodaks do their best." Eastman, a lifelong bachelor, gave away more than half his fortune, \$1 billion in today's dollars, and once paid to remove the tonsils of every child in his home town of Rochester, New York, an operation that was believed beneficial at the time. His suicide note read: "My work is done. Why wait?" **10,700**

488 **'ABD AL-'AZIZ IBN SA'UD** (c.1880–1953) *potentate of petroleum*

Warrior chieftain Ibn Saud swept out of the desert and captured the city of Riyadh in 1901 to begin a campaign that made him the founder and ruler of a unified Saudi Arabia thirty years later. Two American companies paid him \$170,000 for oil-drilling rights and found one fourth of the world's oil reserves. Even with all that wealth under his feet, Saud was habitually short of cash because he loved to indulge his free-spending sons, forty-five of them by twenty-two wives. His successors demanded higher prices for oil, but they stuck to his foreign policies: lip service to the holy war against Israel, anti-Communism, and preference for Americans

over Britons. Britain didn't help its cause when it gave Saud a right-hand-drive Rolls-Royce. When Arabs sit together, the place of honor is on the right. Ibn Sa'ud did not cede honor to any man, certainly not a chauffeur. **10,659**

489 **WILLIAM THE SILENT** (1533–1584) *the quiet man of Dutch independence*

This story has more subplots than a Dickens novel: William was the good guy who fought intolerance and tyranny. Born to Lutheran parents, he was brought to the court of Holy Roman emperor Charles V (61) and converted to Catholicism. He clashed with the emperor's son, Philip II of Spain (427), over governance of the Netherlands. Philip hated Protestants; William didn't. William damaged his relationship with Philip irreparably when he took a runaway nun as his third wife. Although history records William as a man of few words, he made an impassioned plea in the national council of state against nobility's attempts to rule their subjects' consciences. No one listened. When William led the uprising, Philip offered a reward for his assassination. William was killed by a Catholic fanatic before independence was secured. He is generally recognized as the hero of Dutch independence. **10,654**

490 **WILHELM WUNDT** (1832–1920) *founder of experimental psychology*

Wundt's 1874 textbook, *Principles of Physiological Psychology* was a landmark. He analyzed the immediate experiences of consciousness, including feelings and sensations. A true innovator, Wundt converted his laboratory at the University of Leipzig into the first institute for research in experimental psychology, attracting students from around the world. But feelings were frosty between the German giant in this new field and

his American counterpart, William James (543). Wundt advised students not to waste time on such "a second-rate philosopher." Wundt's own writings were voluminous; it would take about three years to complete them, reading fifty pages a day. An irritated James noted that when "critics make mincemeat" of one of Wundt's views, "he is meanwhile writing a book on an entirely different subject. Cut him up like a worm, and each fragment crawls." **10,634**

491 MARIA AGNESI (1718-1799) world's first great woman mathematician

At eleven Agnesi joined the disputations in her Milanese father's salon, conversing on topics from ontology to hydromechanics in Italian, Latin, French, Greek, German, Spanish, and Hebrew. At age twenty, dissuaded by her father from entering a convent, she devoted herself to mathematics. Her masterpiece, *Analytical Institutions for the Use of Italian Youth*, was a sweeping and groundbreaking treatment of algebra. The all-male French Academy was properly impressed, declaring in 1749, "There is no other book, in any language, which would enable a reader to penetrate as deeply into the fundamental concepts of analysis." An elderly British mathematician learned Italian just so he could translate the work into English. Yet nearly two hundred years later, Agnesi wasn't even mentioned in a four-volume, 2,500-page American survey of mathematics. After her father died in 1752, she abandoned mathematics for religion, ultimately joining the order of Blue Nuns. **10,623**

492 JONATHAN SWIFT (1667-1745) the dean of English satirists

Swift's master work, *Gulliver's Travels*, was published anonymously in 1726 and has been a world

classic ever since. Moreover, this brutal put-down of human folly has evolved into a favorite fantasy for children. Written, as Swift said, to "vex the world rather than divert it," the book's political allegory may not be clear to moderns, but we do get the biting wit, irony, and sparkling language. The hero is Lemuel Gulliver, a ship's surgeon, shipwrecked on the island of Lilliput, where natives are only six inches tall. Swift uses Gulliver's adventures to ridicule war, political parties, scientists, philosophers, and human vices and failings. Swift, an Anglo-Irishman, was an Anglican priest appointed dean of St. Patrick's Cathedral in Dublin. In 1729 he became a hero to the Irish in their bitter conflict with the British after his tongue-in-cheek suggestion in *A Modest Proposal* that Irish babies be fed to the rich as a way of reducing Ireland's poverty. **10,610**

493 JAKOB FUGGER (1459-1525) renaissance Rockefeller

Jakob the Rich, as he was called, ran a conglomerate as powerful in its time as IBM, Wal-Mart, and Citibank combined. From their compound in Germany, Fugger and his brothers controlled mines, land, cloth factories, and wholesale establishments, and they were the richest bankers, too. Fugger was the papal collection agent for indulgences, making him a target of Martin Luther's (3) reformist anger, but Luther, always the nationalist, couldn't hide his pride that it was a German making all that money. Fugger lent Charles V (61) 500 guilders so Charles could rig his election as Holy Roman emperor over Francis I of France. Then Fugger sent the millennium's cheekiest dunning letter. He reminded Charles: Without me, you wouldn't be absolute ruler of Germany, Austria, Spain, and the Netherlands, so pay me back! Charles, not the last politician to heed a big contributor, did. **10,609**

494 WALT DISNEY (1901–1966) *animator without equal*

Disney's Mickey Mouse and Donald Duck appeal to children of all ages. He mixed sound and animation to introduce the world's most famous mouse in the 1928 cartoon phenomenon *Steamboat Willie*. Next, he mastered color with his premier full-length cartoon, *Snow White and the Seven Dwarfs*. Disney immortalized on film such childhood classics as *Cinderella*, *Sleeping Beauty*, and *Winnie the Pooh*. He then turned his Midas touch to live-action films. Perhaps most spectacular was Disney's transformation of the ideal family vacation from a week at the beach into total immersion in his fantasy worlds. When Disneyland opened in California in 1955 to a never-ending stream of oh-so-happy patrons, Walt planned a bigger and better theme park in Orlando, Florida. After he died, rumors spread that he had his body frozen until medicine advanced enough to thaw him out. We still don't know if that's true, but we think that's a Goofy idea. **10,599**

495 EDMUND KEAN (1789–1833) *curtain-raiser for modern acting*

Kean changed acting from formalized and mechanical to natural and romantic. The bastard son of an actress, he was adopted by his uncle's mistress, who played in London productions. At age sixteen he began acting in the provinces. Ten years later he was starring in London. Kean specialized in Shakespearean villains: Shylock, Richard III, Macbeth, and Iago. Unlike more regal rivals, he'd crawl on the stage, if necessary, for dramatic effect. "His acting is like an anarchy of the passions, in which each upstart humor, or frenzy of the moment, is struggling to get violent possession of some bit or corner of his fiery soul and pigmy body," wrote critic William Hazlitt. What Kean lacked in stature, he made up for in

monumental magnetism. He also was the first to market star quality by commanding high fees for limited engagements in England and the United States. **10,597**

496 AMBROISE PARÉ (1510–1590) *Frenchman on the cutting edge of surgery*

Paré was trained as a lowly "barber-surgeon," not a physician. But as he accompanied France's armies on their campaigns, he experimented endlessly with ways to heal the wounded. He learned from an old woman the effectiveness of applying crushed onions to burns. He treated wounds with ointment instead of burning oil, adding brandy and turpentine into the mix to combat gangrene. To curb bleeding during amputations, he tied the arteries of the wounded rather than sear the vessels with a hot iron. After he saved a soldier stabbed twelve times with a sword and left for dead, the troops showered Paré with silver coins and carried him around "like a holy body." His fame spread, and he ultimately served four French kings. His book on treating gun wounds was mocked because it was written in French, not Latin, but he retorted that God "understands all languages well." **10,595**

497 BAYBARS I (1223–1277) *savior of Islam*

In the thirteenth century Mongol armies led by Genghis Khan (43) and his kin swept west, killing or conquering everyone in their path. But on September 3, 1260, the advance was stopped at an oasis near Jerusalem by an Islamic army headed by a former slave, Rukn ad-Din Baybars. The decisive battle saved southwestern Asia and North Africa for Islam. A month later Baybars assassinated his sultan and began seventeen years of rule that shrank the territory of the Christian

crusaders and solidified the fledgling Mamluk dynasty that ruled Egypt and Syria for the next two centuries. This founding father was a statesman of the highest caliber, "unimpeded by any scruple of honour, gratitude, and mercy," as historian Steven Runciman wrote. Baybars was a victim of his own cruelty; he died when he accidentally drank poison intended for a foe. **10,590**

498 YASIR ARAFAT (b. 1929) *terrorist peacemaker*

After Palestinians lost control of their homeland with the creation of Israel in 1948, Arafat smuggled arms to Arabs and trained others in terrorism. Elected head of the Palestine Liberation Organization in 1969, he wandered the globe, wreaking terror, dodging enemies, and raising money for his countryless comrades. With his trademark checkered kaffiyeh headdress and a three-day growth of facial hair, Arafat publicized the Arab agenda to Western nations sympathetic to Israel. Meanwhile, the PLO hijacked and bombed airplanes, murdered Israeli schoolchildren, and blew up buses, restaurants, and other places where innocent people gathered. Then the unthinkable happened. An aging Arafat, worn out from decades of combativeness, renounced terrorism and recognized Israel. In return the Israelis accepted Arafat and his PLO as representatives of the Palestinian people. For this Arafat shared the 1994 Nobel Peace Prize with Israeli prime minister Yitzhak Rabin and defense minister Shimon Peres. **10,589**

499 YURY GAGARIN (1934-1968) *first man in space*

Soviet Air Force lieutenant Gagarin made his historic 108-minute swing around planet earth on the *Vostok 1* spacecraft in 1961. This feat fueled an undeclared American-Soviet race to the moon. The

flight "reflected the heroic accomplishments of the Soviet people," crowed Soviet leader Nikita Khrushchev (619). President Kennedy pledged to put Americans on the moon within a decade. Only after the Soviet Union crumbled did the secret come out: Gagarin had almost been killed on reentry when his spacecraft failed to separate from its braking rocket, sending *Vostok* into convulsions. "Malfunction!" screamed notes taken by Gagarin's flight commander on earth. "Everything was spinning around," Gagarin later told debriefers. The crisis lasted ten minutes before separation was achieved and the craft descended safely. Had the world known the truth, the space race might have slowed to a crawl, with NASA first sending more chimps into the vast unknown. **10,588**

500 AMELIA JENKS BLOOMER (1818-1894) *girdle slayer*

Before the Civil War an outdoor stroll was an ordeal for women, with heavy petticoats hanging beneath their skirts dragging through muck and manure in urban streets, and with girdles and corsets, according to one magazine, "trammeling their genteel thorax with springs of steel and whalebone, screwing in the waist to Death's hourglass contraction, and squeezing lungs, liver, and midriff into an unutterable cram." Bloomer ditched the whole mess for Turkish-style trousers. Though not the first to wear them, as a public figure—she edited a women's publication, *The Lily*—she popularized them as "bloomers" and became a national object of both admiration and mirth. Women in the Midwest held Bloomer balls, but an editorialist in the South thundered, "Our ladies blush that their sisters anywhere descend to such things." Bloomers never really caught on, and Bloomer herself gave up the garb in 1859. But she had made her point, and women today breathe easier. **10,561**

Too many writers.

That's what some of our friends said when we showed them advance copies of the book you now hold in your hands.

And it is true that we have included more literary figures—novelists, poets, playwrights, and essayists—than any other category. Wordsmiths account for nearly twelve percent of the first five hundred people on our list, far outstripping the representation of scientists, say, or inventors, or warriors, or kings—all groups that would seem to have a greater practical impact on our lives than these muses' apprentices.

Yet now, rather than making amends for this imbalance, we have abandoned all restraint. In the next chapter, fully *one-fourth* of all our subjects are writers. And what writers! Emerson, La Fontaine, Shelley, Verne, Yeats, Casanova, Brontë, Faulkner, Irving, Villon, Martí, and Andersen are all there. So are Lope de Vega, Conrad, James, Corneille, Beauvoir, Abigail Adams (for her diaries), Darío, Khayyám, Wilde, Wordsworth, Mann, and Lu Hsün.

And that litany doesn't even include an additional dozen or so people—historians, religious thinkers, psychologists, a cookbook author, an encyclopedist, a sociologist, a social activist, and a legal scholar—who made the grade by putting their thoughts on paper.

Compare this army of scribblers to the puny tally of just one inventor (of the typewriter), one economist (a truly ugly Frenchman), one sports hero (a real Babe), two architects, two explorers, two saints, four freedom fighters, and not a single pope.

What's our excuse? You get four writers together, and—we just can't help ourselves.

We'll make you a bet. Far from reproaching us for squeezing too many authors into our compendium, you'll take us to task for excluding one of your favorites. But you know what? We really wanted to put him (her) in, honest; we swear he (she) ended up as number 1,001.

501 AARON MONTGOMERY WARD (1844–1913) mail-order merchandiser

Ward wooed isolated farmers by providing everything a settler needed—from bullets to corsets to pianos to tombstones. He undercut general stores by eliminating sales clerks and offering a money-back guarantee. His first catalog, in 1871, was a one-page sheet that he and his wife personally addressed to thousands of members of the farmers' collective, the National Grange. Customers were skeptical, and orders trickled in. The Great Chicago Fire wiped out Ward's inventory, and the panic of '73 nearly destroyed him. He persevered. In 1875 his thirty-two-page catalog ranked among the best-read books of the day. By 1893 his "wishbook" weighed two pounds, numbered 544 pages, and was used in rural schools to supplement reading primers and in outhouses to—well, you know. In the 1940s the Montgomery Ward catalog, which had promoted ready-to-wear and created the national consumer, was named one of the most influential books in America. **10,520**

502 KAREN HORNEY (1885–1952) *Freudian who shrank Freud's influence*

For most of his career, Sigmund Freud (15) taught that female hysteria was caused by penis envy, but in 1922 Horney offered a different explanation that was so good, even Freud adopted it. She said many women suffered from feelings of being *geschlagen*, struck down, by their fathers, a kind of psychic castration. Horney emigrated from Berlin to New York in 1932 and as dean of the American Institute of Psychoanalysis, continued to voice anti-Freudian ideas, such as the notion that mental health is affected as much by environment and culture as by sex. Her teaching gave psychoanalysis a perspective that had eluded the German

and Austrian men who dominated the field in its early years. Not that Horney disliked men. She cheated on her husband Oskar regularly for most of their seventeen-year marriage, and one of her lovers had been her patient. Our analysis of that: naughty, naughty. **10,508**

503 LUIGI GALVANI (1737–1798) *electricity galvanizer*

Galvani was teaching anatomy at Bologna when he began studying the effects of electricity on frogs. By chance, he noticed that frogs' legs being dried on brass hooks would twitch when the hooks were hung on an iron railing. He concluded that animal tissue contained a force he called "animal electricity." Galvani thought this "electric fluid" flowed from the brain, with nerves acting as conductors to the muscles. Electrician Alessandro Volta (425) found Galvani's theory "one of the most beautiful and surprising discoveries." But Volta's own experiments showed that the electrical current originated in the metals, not the frogs. Galvani got it wrong, but we honor him for sparking the scientific inquiry into electricity. His name is in *galvanizing*, the process of protecting iron or steel with zinc coating, and *galvanometer*, a device for detecting electric current. We also owe him for inspiring Volta to invent the first battery, another "beautiful" discovery that led to the age of electric power. **10,492**

504 RALPH WALDO EMERSON (1803–1882) *transcendent poet*

His most famous line describes the outbreak of the American Revolution: "Here once the embattled farmers stood / And fired the shot heard round the world." But Emerson was more interested in proclaiming America's literary independence than its political separation from England. He yearned for the appearance of a poetical genius equal to the young nation's grandeur—and found

him in Walt Whitman (318). Meanwhile, the ex-Unitarian minister joined Henry David Thoreau (375) in preaching Transcendentalism, a kind of mystical union with nature. In his books and lectures Emerson railed against the sterile scholarship and religious orthodoxy that he believed hindered man's discovery of the divine spark within himself. For all his intellectual daring, however, he adhered to his era's delicacy in expressing sexual longing, declaring to his future wife Lydia Jackson, "I do sympathize with the homeliest pleasures and attractions by which our good foster mother Nature draws her children together." **10,482**

505 MERIWETHER LEWIS (1774-1809) *the Lewis in Lewis and Clark*

In 1803 President Thomas Jefferson (64) feared that the English would occupy the unmapped land west of the new Louisiana Territory. So he commissioned his Virginia neighbor and secretary, Lewis, to trek across the continent first and report on the animals, plants, mountains, deserts, rivers, and Indians in that forbidding wilderness. It was the most celebrated journey in American history, and the land Lewis claimed became Washington, Oregon, and Idaho. The explorers proved that there was no all-water route across the continent. In 1805 Lewis and his lieutenant, William Clark, reached the Pacific Ocean. Romantic legends say the Shoshone woman Sacajawea showed them the way, but it was Lewis's skill as a backwoodsman and leader that kept the expedition together for its three and a half years and six thousand miles. **10,460**

506 IWASAKI YATARO (1835-1885) *Japanese industrialist who founded Mitsubishi*

There's a lot more to Mitsubishi than cars. In fact, when Iwasaki got started, the automo-

bile was just a gleam in the eye of some distant mechanical geniuses. Ships were the thing—magnificent steamships that chugged around Asia. Iwasaki acquired the remnants of a feudal shipping industry, renamed it Mitsubishi, and built it into the second largest *zaibatsu* (family-owned industry), just behind Mitsui. Government officials wanted to end Japanese dependence on foreign shipping, and Iwasaki accommodated them by taking over the state shipyards in 1884. The rest is industrial history—Iwasaki's empire expanded into banks, copper, coal, gas and electric utilities, warehouses, machinery, chemicals, oil, paper, textiles, and yes, cars. Mitsubishi survived the Japanese defeat in World War II, but its two-hundred-plus companies were split during Allied occupation. **10,435**

507 ALFRED KRUPP (1812-1887) *entrepreneur gone ballistic*

Minus the driven Alfred, there would have been no Krupp dynasty to arm Germany in three major wars. The Krupp family business was making pots and pans. Then Alfred's father founded a steel-making firm in Essen in 1811. He died a failure, leaving his fourteen-year-old son in charge. Alfred struggled for years. Through sheer determination, he turned the business around. To demonstrate the strength of his steel, Alfred began manufacturing munitions, earning the nickname "the Cannon King." Krupp guns soon thundered in the Franco-Prussian War of 1870. After Krupp died, his 42-centimeter howitzers pummeled Allied forces in World War I. The Krupp family's secret buildup of German military might and support of Hitler (20) paved the way for World War II. Alfred's great-grandson was tried as a war criminal at Nuremberg. From pots to Panzers. Some legacy. **10,411**

508 JEAN DE LA FONTAINE (1621–1695) *fabled French poet*

In mocking human foibles, La Fontaine has few equals. One of our favorite characters is the frog who, beholding the mighty ox, tries to puff herself up to his size until “the stupid midget blew herself in two.” Adds the author: “The world is full of people not one whit more sage.” His morality tales are familiar the world over. One of the more famous ones, about a grasshopper and an ant, preaches the virtue of industriousness. “Locust, having sung her song / All summer long, / Saw her larder running low / As the wind began to blow.” So she begs for food from the ant. The ant refuses with this withering response: “Sang songs, eh? I am so glad. Now’s your time to dance.” La Fontaine could be selfish (he married a fourteen-year-old girl, then abandoned her) and sycophantic to the rich. But he showed the world how to laugh at itself; what greater achievement could any author want? **10,389**

509 PERCY BYSSHE SHELLEY (1792–1822) *master of sweeping sentiment*

Oh, for the time when the languid recitation of Shelley’s “To a Skylark” and “Ode to the West Wind” was the preferred foreplay of the English-speaking young. Alas, Shelley’s writings have less mass appeal today than his wife Mary’s novel *Frankenstein*, but for almost two centuries Percy’s poems made the world tingle. Shelley was expelled from Oxford for writing an atheistic tract, eloped with a sixteen-year-old beauty, dumped her for the more intellectual Mary, and traveled through Europe with other poetic supernovas, Leigh Hunt, John Keats (297), and Lord Byron (385). Contemporary critics appreciated him little. When his body washed up on an Italian beach after a sailing accident, the *London Courier* reported, “Shelley, the writer of

infidel poetry, has been drowned; now he knows whether there is a god or no.” **10,379**

510 NETTIE MARIA STEVENS (1861–1912) *geneticist with a fertile mind*

Henry VIII (100) discarded his first wife Catherine of Aragon (852) because she failed to give him a male heir. Thanks to Stevens, we know Henry had only himself to blame. Stevens demonstrated that, contrary to the folk wisdom of the ages, the man, not the woman, determines the sex of an offspring. Working with beetles, Stevens described two different kinds of sperm, one with an X chromosome and the other with a Y chromosome. She observed that only eggs possess two X chromosomes and concluded that eggs fertilized with X sperm produce females, while eggs with Y sperm produce males. Stevens, who started her career as a librarian, then earned a doctorate in biology, was centuries too late to change the fate of Henry VIII’s wives. But she erased one of genetics’ big question marks. **10,358**

511 TAMERLANE (c.1336–1405) *definitely not Mr. Nice Guy*

His Persian enemies contemptuously called him “Timur the Lame,” but it didn’t do them any good. This cutthroat Mongol gobbled up principalities like porridge. His mounted archers spilled blood from Mongolia to the Mediterranean. Whole villages and cities were destroyed. Damascus was occupied and its treasured artisans shipped off to beautify Samarkand, Tamerlane’s home city. In 1401 twenty thousand residents of Baghdad were massacred and the city’s monuments destroyed. Those who dared revolt against his iron rule rarely lived to regret it; Tamerlane’s forces bludgeoned rebels in Persian territories and built towers out of their skulls. Tamerlane, the last of Central Asia’s conquerors, then set out to subdue China but died

en route. His body was entombed in a mausoleum in Samarkand. In 1941 Soviet archaeologists opened it and found the skeleton of a tall, powerfully built man, lame in his right leg and arm. **10,342**

512 CHARLES LYELL (1797-1875) *old-world geologist*

The Scottish scientist forged the modern view of the earth's structure and encouraged a young naturalist named Charles Darwin (7) in his scientific inquiries. As an infant, Lyell was called "the most indefatigable squaller of all the brats of Angus." That energy went to good purpose in later years. In his endless field trips—to the Scottish lakes, the riverbeds of central France, Italy's Mount Etna, the Pyrenees, Niagara Falls—Lyell collected data on rock formations that persuaded him that the earth's surface had evolved through incremental physical and chemical processes over vast stretches of time, not through periodic cataclysms like the biblical Flood. Though an amateur, he disseminated his theory in his acclaimed *Principles of Geology*, which he revised and updated eleven times over forty years. Lyell was first a mentor to, then a disciple of Darwin, who said the older man's work "altered the whole tone of one's mind." **10,333**

513 JAN VERMEER (1632-1675) *Dutch master of realism*

This son of a Delft art dealer was the deft early painter of ordinary people doing ordinary things. He did it with photographic precision by using a camera obscura—a primitive projector—to display the images of his models on a flat surface to get the perspective right. Vermeer's works were unappreciated in his lifetime. A court-appointed receiver, Anton van Leeuwenhoek (107), later to become a famous microbiologist, forced Vermeer's wife to sell twenty-five of his paintings for a pittance to pay a grocery bill. Two centuries after

his death Vermeer emerged from obscurity when connoisseur Etienne Thoré-Burgër wrote pamphlets trumpeting the painter's genius. After that, owning a Vermeer was as good as finding gold in the attic, and forging Vermeers became a cottage industry. A guard at the war crimes trial after World War II said Hitler's (20) henchman Hermann Goering showed more emotion when his prized Vermeer was exposed as a fake than when he was sentenced to death. **10,327**

514 HOKUSAI (1760-1849) *the Japanese artist most renowned in the West*

We toyed with saying Hokusai was the Toulouse-Lautrec (817) of Japan, but in truth Lautrec was the Hokusai of France. Western artists, especially impressionists like poster prince Lautrec, Edgar Degas (482), and Claude Monet (196), collected Hokusai's prints and studied them. He is the most famous woodblock print artist of the *ukiyo-e*, which means "pictures of the floating world" but which actually depicted everyday life. Toward the end of his career he signed prints "the old man, mad on drawing." Indeed he was. Estimates number his output at about thirty thousand illustrations, woodblocks, silk screens, drawings, and paintings. We like *Beneath the Wave off Kanagawa* from his most famous print collection, *Thirty-six Views of Mount Fuji*. When he was well into his seventies, Hokusai traveled around Japan, creating prints. He returned home to Edo to find residents dying from famine. He fed himself by trading prints for rice. **10,321**

515 ROBERT E. LEE (1807-1870) *hero of a civilization gone with the wind*

Aristocratic Lee was an unlikely hero to rally the rebel South during the Civil War. He denounced

slavery as evil, likened secession to revolution, and detested war. Dedicated to the union, he was offered command of the Federal army. But after weeks of agonizing over service to his country or duty to his state, he chose his cherished Virginia and was made Confederate commander. "Duty," he told his son, "is the sublimest word in our language." The Union's greater numbers and resources doomed the Confederacy. But West Point-trained Lee, the finest military tactician this country has ever produced, outmaneuvered Union forces at nearly every turn, prolonging the conflict into an anguished four-year struggle. After surrendering to Grant (371) at Appomattox, Lee was asked to write his memoirs. He declined, saying he would be "trading on the blood of my men."

10,301

516 CHARLES LINDBERGH (1902–1974) aviation demigod

Lindbergh's epochal flight from New York to Paris on May 21–22, 1927, in *The Spirit of St. Louis*, the first nonstop solo crossing of the Atlantic, triggered a worldwide outpouring of adulation. Perhaps he was the last true hero; perhaps he was just an irresistible love object for the masses, an all-American boy, brave and incorruptible. At Le Bourget Airport in Paris, a crowd of several hundred thousand mobbed his plane. *The New York Times* proclaimed: LINDBERGH DOES IT! TO PARIS IN 33½ HOURS; FLIES 1,000 MILES THROUGH SNOW AND SLEET; CHEERING FRENCH CARRY HIM OFF FIELD. The aviator's welcome home was even more tumultuous. In time Lindbergh would be pitied for his two-year-old son's kidnap-murder and maligned for opposing America's entry in World War II. But posterity will honor him for that magical moment when he conquered the heavens—and humanity's heart.

10,287

517 ALP ARSLAN (c.1030–1072) conquering sultan

His name means "valiant lion," and legend says his moustaches were so long, he tied them behind his head before a battle lest they foul up his longbow. This Persian conquered much of the Middle East for the emerging Seljuk dynasty, and his victory at the Battle of Manzikert in 1071 was a turning point in history. His cavalry defeated a hundred thousand soldiers of Christian Byzantium, secured eastern Turkey for Islam, and started the Byzantine Empire on the road to extinction. Reports of Alp Arslan's cruelty and arrogance—he used the captured emperor Romanus Diogenes for a footstool—whipped up anti-Islamic fervor that led to the Crusades. One afternoon a condemned prisoner with nothing to lose rushed at Alp Arslan with a knife. The haughty sultan put an arrow in his bow and moved toward the assailant, but he stumbled—on his feet, not his moustache—and was stabbed to death.

10,263

518 WINSLOW HOMER (1836–1910) the artist of the elements

Quiet and reclusive, Homer warmed to the outdoors. After stints in a lithographer's shop and as artist-correspondent at the Union front during the Civil War, Homer turned to oil painting. He developed a unique style that was realistic and bold, painting nature as he saw it: forests and lakes of the Adirondacks, palm trees and glistening waters of Florida and the Caribbean. Homer's watercolors and oils exert a strange pull; we feel the grim determination of rescuers in *The Wreck* and the lone fisherman's fear in *Fog Warning*, as gray mists rise on the horizon. In 1883 the crusty Homer retreated to a desolate fishing village in Maine to paint increasingly abstract seascapes. "The life that I have chosen gives me

my full hours of enjoyment for the balance of my life," Homer wrote. "The Sun will not rise, or set, without my notice, and thanks." **10,237**

519 JULES VERNE (1828-1905)

sci-fi guy

Earlier science-fiction novels exist, like Mary Shelley's *Frankenstein*, but Verne's were the first to spin futuristic fantasies on painstakingly scientific foundations. The wonders he depicted in *A Journey to the Center of the Earth*, *Twenty Thousand Leagues Under the Sea*, and other tales have stirred readers' imaginations ever since. Verne foresaw airplanes, submarines, gas-powered cars, computers, and hundreds of other twentieth-century contraptions. The space pioneers in *From the Earth to the Moon* were launched from the same spot, Florida, in a capsule built of the same material, aluminum, at almost the same escape velocity, and splashed down in the same ocean, the Pacific, as America's *Apollo 8* astronauts. Writers H. G. Wells, Ray Bradbury, and Arthur C. Clarke (author of *2001*) all acknowledged their debt to the Frenchman. "Who can say," asked astronaut Frank Borman, "how many of the world's space scientists were inspired by their boyhood reading of Jules Verne?" **10,201**

520 GIOVANNI GIACOMO CASANOVA DE SEINGALT (1725-1798)

the original Casanova

"When the lamp is taken away, all women are alike, but without love this great business is a vile thing," Casanova wrote, showing his seedy and sentimental sides in *The History of My Life*. It's the millennium's prototypical dirty book, though it's more charming than pornographic. The Venetian-born diarist was expelled from a seminary for cuddling with another boy, and he became a Europe-trotting diplomat, journalist,

spy, gambler, con man, and sometime jailbird. At every stop Casanova seduced women, including three sisters he met on a trip in 1744. (The sister posing as a castrated man was a challenge.) A bowdlerized version of his memoirs, published in 1821, made the word *Casanova* a synonym for womanizer. The world had to wait until 1960 for the unexpurgated edition based on the mildewing original manuscript, which survived World War II in a Leipzig bank vault. **10,165**

521 WILLIAM BUTLER YEATS (1865-1939)

the Irish bard

In his poetic eulogy to Yeats, W. H. Auden wrote, "mad Ireland hurt you into poetry," and it's true that Yeats had an ambivalent relationship with his homeland. He hated the conservatism and violence, yet loved the land, the simple folk, the legends, and the rhythm of the English language. It all seeped into Yeats's poetry and plays.

I find under the boughs of love and hate,

In all poor foolish things that live a day,

Eternal beauty wandering on her way.

That's what he wrote in *To the Rose Upon the Rood of Time*. Yeats loved many women, especially the fierce nationalist Maud Gonne. His wife Georgie—he was age fifty-two, she was twenty-five when they wed—tolerated his flings and shared with him a love of the occult. Anthologist M. L. Rosenthal called him "the most widely admired, by common reader and sophisticate alike, of all modern poets who have written in English." **10,158**

522 EMILY BRONTË (1818-1848)

writer of demonic love

Not even her tight-knit family realized that shy homebody Emily Brontë harbored the passion and intensity to write *Wuthering Heights*, now a classic in English literature. "It is a fiend of a

book," wrote author Christina Rossetti (618) in 1854. "The action is laid in Hell—only it seems places and people have English names there." It's the turbulent tale of ill-fated lovers Catherine Earnshaw and the brooding orphan Heathcliff, who seeks revenge on those who have stood in their paths. The backdrop is the desolate Yorkshire moors, Emily's treasured turf since childhood. Unlike her sister Charlotte, who won praise for *Jane Eyre*, Emily's book irritated critics, who termed it "disagreeable" and "gloomy." Today her contribution is considered the greater of the two. A year after publication of *Wuthering Heights*, Emily died of the family scourge, tuberculosis. She never lived to see her poetic genius inspire others, including the equally enigmatic writer, D. H. Lawrence.

10,147

523 DAG HAMMARSKJÖLD (1905–1961)

Mr. United Nations

From 1953 until his death in a plane crash on a peace mission to Africa, Hammarskjöld built the United Nations into a formidable force in international politics and fought off efforts by the superpowers to make it a pawn in the cold war. Hammarskjöld also initiated the organization's peacekeeping role, notably in settling the Suez crisis of 1956 and containing the fighting in the Congo in the early 1960s. Best described as asexual, the Swedish statesman once dragged a woman out of his bed who had sneaked there hoping to trade her favors for a secretarial job, slapped her, and called the police. Deeply religious, he befriended Martin Buber (723) and undertook to translate the Jewish philosopher's *I and Thou* into Swedish. Twelve pages of the manuscript were found in the wreckage of the crash that killed him. "The road to holiness," Hammarskjöld once wrote, "passes through the world of action."

10,101

524 JOHNNY TORRIO (1882–1957)

organized crime's organizer

Torrio rubbed out his own uncle, but argued crime would pay even more if gangsters worked together. His 1934 crooks' summit drew together Lucky Luciano, Bugsy Siegel, and Meyer Lansky. They carved the country into bootlegging territories, then wreaked murder and mayhem to give the organization muscle. Torrio had been a two-bit cutup in New York when he was summoned to Chicago by Uncle Jim Colosimo, who ran a chain of brothels but lacked ambition to expand into other lucrative areas. When Torrio wanted Big Jim bumped off, he called in a young punk who was trying to evade a murder charge in New York—Al Capone. Torrio lost his taste for day-to-day delinquency after he was wounded by a gunman from another crime family and went to prison for brewing beer. He retired, handed Capone the daily crime operation, and built his national syndicate.

10,071

525 WILLIAM FAULKNER (1897–1962)

southern stylist

Nobel laureate Faulkner wrote brooding tales of America's post-Civil War South and its decaying values. Many Faulkner novels unfold in Yoknapatawpha County, a fictionalized version of his northern Mississippi haunts. He specialized in dysfunctional families with foul secrets. His best novels: *The Sound and the Fury* and *As I Lay Dying*. Meat-and-potato readers don't warm to Faulkner's run-on sentences, frequent flashbacks, and stream of consciousness. Sure he's difficult—but mighty rewarding. To make a steady living while he wrote novels, Faulkner worked odd jobs, including a stint as scriptwriter in Hollywood—one project was the script for Hemingway's (388) *To Have and Have Not*. But one day he went AWOL from a set. His angry agent tracked him

down to Mississippi and demanded what the hell was going on. "Ah asked my producer if ah could work at home," Faulkner related by phone, "and he said fine, so heah ah am." **10,065**

526 DUKE ELLINGTON (1899-1974) *royal riffer*

Ellington was an instrumental figure in American jazz and a founder of big band music and swing. Picture a jazz fest in the White House in 1969. President Richard Nixon (904) toasts "the greatest Duke of them all." The prez plays the piano. Then Clark Terry blasts the trumpet, Gerry Mulligan plays sax, and Joe Williams sings. Even Marine band members join in. They rock until the wee hours in honor of Ellington's seventieth birthday. Only fitting for the man born Edward Kennedy Ellington, composer, bandleader, and pianist famous for "Sophisticated Lady" and "Satin Doll." As a boy, Duke sensed his would be a unique contribution to the world. Some mornings he would descend the staircase in his middle-class Washington, D.C., home and tell his mother and aunt, "Now listen, this is the great, the grand, the magnificent Duke Ellington." Then he'd bow and command, "Applaud, applaud!" **10,048**

527 PHILIP II OF FRANCE (1165-1223) *precursor of French power*

The most important king of the 350-year Capetian dynasty, Philip tripled the royal domains. Before his birth his father Louis VII had a dream in which his future son drank human blood from a chalice. Certainly rivers of blood spilled during Philip's reign, as he reconquered French territories held by English kings. To consolidate royal power, he was "hard on the evil barons and wishful to sow discord among them," a contemporary chronicler reported. In 1190 he went on the Third Crusade

with Richard the Lion-Hearted of England but was stricken with malaria that "wrought havoc with his bones so that his fingernails and his hair fell out," according to his court chaplain, and he returned home. One critic, Gille de Paris, lamented that France was "torn apart by the extortioners of her prince," but conceded that other European monarchs were worse. **10,032**

528 GIOVANNI PIERLUIGI DA PALESTRINA (c.1525-1594) *musical master of the Mass*

The Italian composer of 105 masses whose works fill thirty-three volumes, Palestrina has been called the "savior of church music." He learned about church music as a choirboy; later he played the organ at the church in his native Palestrina. He sang with the pontifical choir for a time but got tossed out because of a rule prohibiting participation by married men. Palestrina refused several prestigious positions, including a request to direct music for the court of Austria's emperor Maximilian II, because the salaries were miserable. Eventually he became the Vatican's master of music. When his wife died, Palestrina delighted the pope by announcing he would enter the priesthood. Palestrina was so admired by the church hierarchy that he was allowed to keep his church position even after he was wooed from his studies and married a wealthy widow. **10,018**

529 JOHN JACOB ASTOR (1763-1848) *first American monopolist*

Before Rockefeller (486) and oil, Ford (51) and cars, Gates and software, there were Astor and furs. He came from Germany to America to sell musical instruments but there was more money in pelts than flutes, and by the 1820s his American Fur Company had just about monopolized the market. He did it by bribing officials to give him

exclusive rights to set up trading posts in various wilderness territories. Michigan governor Lewis Cass, for example, got \$35,000 from Astor in 1817. Such payoffs were a bargain. Astor spent a mere two dollars in trade goods for every package of furs that fetched \$140 in London markets. Astor invested his earnings in New York real estate. His wealth at his death in 1848 was the foundation for the fortune that the Astors who followed him lavished on society parties, Newport mansions, and charities like New York's public libraries. **9,998**

530 FRANCESCO BORROMINI (1599–1667) *go-for-baroque architect*

Borromini's fame spread throughout Europe for his crowning achievement: the daring creation of the small church and monastery, S. Carlo alle Quattro Fontane in Rome. While contemporary architects based their designs on the proportions of the human body, Borromini modeled his on geometric forms. And he treated space and light as architectural components. Inside, S. Carlo is diamond-shaped with a curving outline alternately convex and concave. Borromini's use of lighting makes the dome almost seem to float above worshippers. Borromini and the great Bernini (238) collaborated on projects such as the famous baldachin in St. Peter's, with its four undulating columns crowned by S-shaped volutes. Borromini could be withdrawn and subject to rages that alienated patrons. In the throes of one fit of fury, after having suffered from depression for months, he seized a sword and killed himself. **9,985**

531 CHRISTOPHER LATHAM SHOLES (1819–1890) *the #@!* father of the asdfjkl;*

How many billions of fingers have flown over the infamous *qwerty* keyboard, named for the letter

sequence on the second row, since the Wisconsin journalist designed it in the 1860s? Sholes, whom we consider the inventor of the typewriter, separated the most-used letters to prevent the typebars from jamming under the assault of speed freaks. He also put all the letters of *type-writer* on the same row to make it easier for salesmen to peck out the new name. The typewriter revolutionized business. The Remington Arms Company promoted it with the slogan, "The typewriter is to the pen what the sewing machine is to the needle." After Mark Twain (188) submitted the first typewritten manuscript to a publisher, few wordsmiths were able to avoid the machine, though English poet Robert Graves declared grumpily, "I have never used one and have warned my daughters not to." Today the typewriter can rest in peace, but *qwerty* lives on—on computer keyboards. **9,978**

532 THOMAS CHIPPENDALE (1718–1779) *wondrous woodworker*

Chippendale targeted the emerging middle class of mid-eighteenth-century England as his market. Knowing that their finances were slimmer than the mansion crowd's, he built his London business by simplifying fashionable furniture styles, notably rococo, and keeping embellishments to a minimum. His mahogany cabinets were masterful, his chairs elegant and comfortable. Chippendale won greatest fame, however, for *The Gentleman and Cabinet Maker's Director*, the most important collection of furniture design published to that date. In his book Chippendale dissected his designs, showing cross-sections of moldings and exact dimensions. The catalog appeared in 1754 and had run to three editions by 1760. Furniture makers in the American colonies bought it and made Chippendale knockoffs. Because the book became a bible for borrowers,

it's difficult even for experts to tell if antiques are real Chippendales or masterful copies. **9,962**

533 **FRANÇOIS VILLON** (b. 1431) *brawling poetic chronicler of the late Middle Ages*

If not for French police records, we would know nothing of Villon's life, nothing of his riotous student days at the University of Paris, nothing of the men he killed (he stabbed a priest in the groin, but it was a fair fight) or of his close call with the gallows. Parliament pardoned Villon just before he was to be hanged in 1463, and then he vanished from history. He left behind poems that show that his times were like our own. English writer Wyndham Lewis called Villon "a companion of thieves and whores and vagabonds, producing from the dregs of his life an exquisite flower of pure poetry; a temper as flecked with dark and light as an April day." His most famous lyric is the "Ballad of the Ladies of Bygone Times," with its finale, "*Mais où sont les neiges d'antan?*" "But where are the snows of yesteryear?" **9,958**

534 **HARRIET TUBMAN** (c.1820-1913) *the Moses of her people*

Tubman, a slave on a Maryland plantation, couldn't bear her cruel treatment. "There was one of two things I had a right to, liberty or death," Tubman said. "If I could not have one, I would have the other, for no man should take me alive." She escaped to Pennsylvania, aided by the Underground Railroad, a series of secret safe houses for runaway slaves heading north. Tubman soon became the preeminent guide on the Railroad, making nineteen trips south and back and leading more than three hundred slaves—including her parents—to freedom. With a \$40,000 bounty on her head, Tubman

still spoke out against slavery and, when civil war erupted, turned spy for the Union. Despite her contribution, Tubman had to lobby more than thirty years to gain a government pension. **9,942**

535 **FREDERICK HOPKINS** (1861-1947) *the one-a-day man*

The British biochemist received the 1929 Nobel Prize for medicine for his discovery of "essential nutrient factors"—today known as vitamins—in animal diet. Hopkins might shudder at the pill-popping mania he touched off in people eager to prolong their lives or just fight off the flu. Linus Pauling, another Nobel laureate, famously ingested enormous quantities of vitamin C to ward off colds and cancer. Many vitamins have indeed been shown to forestall or reverse diseases and disorders like cancer, heart disease, rickets, calcium deficiency, impotence, and even carpal tunnel syndrome. But many specialists say a healthy diet is the best source of these nutrients, and they disparage many of the claims made by the vitamin-pill industry. Dr. Victor Herbert, an American crusader against nutrition quackery, said a one-a-day vitamin dose "just gives you expensive urine." **9,921**

536 **ALBERT LUTHULI** (c.1898-1967) *African freedom fighter*

As president of the African National Congress in the 1950s, Luthuli organized his "Defiance Campaign" against apartheid. South African authorities tried to silence him. They exiled him, arrested him, and tried him for treason. They banned his writings and outlawed his speeches. Nothing worked. The steamroller that was Luthuli thundered on, providing the initial oomph in what was to be a decades-long battle. Under Luthuli's direction, blacks organized resistance to curfew and segregation laws. At one rally police fired at unarmed blacks, killing 70 and injuring 250. The son of a

washerwoman, Luthuli also served as the Zulu chief. He won the 1960 Nobel Peace Prize for leading the ANC's passive resistance at a time when, a continent away, American blacks were also boycotting segregated public buses and lunch counters. Luthuli was crossing a railroad bridge near his farm, when he was hit by a train and died. **9,899**

537 JOSÉ MARTÍ (1853–1895) *Cuban revolutionary with a pen*

As a teenager, Martí was known briefly as 113, his number in the Cuban prison where he was sent for anti-Spanish agitation. Then he was an exile in Paris, Mexico City, and New York, using his pen to rally support for Cuban independence. From his anguish came haunting poetry, some political, some as apolitical as the writing of other symbolist geniuses. A sample: "And on the backs/ Of giant birds/ Endless kisses/ Awaken." He wrote: "Without profound pain, man never produced truly beautiful works." He could write fast, too. To help a friend with writer's block fulfill a contract, Martí ghostwrote the classic novel *Lucia Jerez* in seven days. His martyrdom in a guerrilla skirmish rallied Cubans to the revolution that made the country independent four years later. **9,873**

538 ENRICO CARUSO (1873–1921) *the golden voice*

Caruso was a poor factory worker in Naples earning extra *lire* by serenading the lady loves of Neapolitan swains, then a fill-in tenor for operas in Naples, Rome, and Milan. His big break came in 1898 with his creation of the role of Loris in *Fedora*. Acclaim spread worldwide. In 1903 Caruso performed at the opening night of the Metropolitan Opera in New York in *Rigoletto* and opened each season there for the next seventeen years. He also left another legacy: He was the first opera star to record his voice on gramophone records.

Composer Giacomo Puccini recognized Caruso's enormous talent. It was 1897, and Puccini was sitting at the piano, playing from his *Bohème* while the then-unknown Caruso was singing. Suddenly Puccini whirled around on the piano stool to face Caruso. "Who sent you to me?" he asked. "God?" **9,851**

539 GODFREY NEWBOLD HOUNSFIELD *(b. 1919) CAT scanner*

Hounsfield, an English engineer, helped design the first all-transistor computer in Britain in 1959. But his company refused him money for a project to make images of human organs because nobody could figure out what he was talking about. So Hounsfield wangled a government grant and, as one technology specialist described it, "borrowed spare parts from a half-dozen different devices and added to that a technology of his own creation that no physicist, physician, or radiologist had ever imagined before." What he was talking about turned out to be computerized axial tomography, an X-ray technique for obtaining clear cross-sectional images of internal organs. The development of the CAT scan in the early 1970s revolutionized diagnostic medicine and won Hounsfield and Allan MacLeod Cormack, an American who did his own research into CAT technology, the Nobel Prize in 1979. **9,828**

540 LEVI STRAUSS (1829–1902) *blue jeans genie*

San Francisco merchant Strauss wanted to ensure that the grizzled, cantankerous misfits who bought his trousers to mine the California gold rush were satisfied. He double-stitched seams and used tentcloth. He hired a tailor who had come up with the novel idea of using copper rivets to reinforce pockets, which had to hold tools and rocks. Then he imported an even

sturdier fabric, denim, to make the pants. So confident was he that his "Levi's" would stand up to even the harshest abuse that his label featured two horses in an unsuccessful tug-of-war with a pair of jeans. What started as work clothes became America's uniform in the 1950s, when some fashion arbiter teamed a pair of jeans with saddle shoes. Since then jeans have been rolled up, frayed, bleached, torn, patched, embroidered, beaded, and dyed; they're still the single most popular clothing item in the world. **9,795**

541 **BENVENUTO CELLINI** (1500-1571) artist, rogue, and writer

Cellini the artist made bronze figures and gold medallions with exquisite grace and detail. Victorian admirer W. M. Rossetti said Cellini's statue, *Perseus Holding the Head of Medusa*, is "full of the fire of genius and the grandeur of a terrible beauty." Cellini the rogue claimed to have fired the shot that killed the constable of Bourbon, leader of the French attack on Rome in 1527. He killed commoners, too, but always there was a patron to bail him out. When Cellini murdered a man in a dispute over a horse, an art-loving cardinal arranged his safe passage to France. But it is Cellini the writer whom we celebrate most. *The Autobiography of Benvenuto Cellini*, his account of his art and adventures, the best memoir ever written by an artist, conveys the rowdy spirit of the Renaissance. It makes riveting reading, even today. **9,778**

542 **FRANCISCO DE ORELLANA** (c.1490-1546) first explorer of the Amazon

Orellana's voyage down the world's mightiest river was for survival not adventure. He was a lieutenant in a Spanish land force searching for cinnamon and gold east of Quito. Instead his party met starvation. When Orellana and fifty

men sailed downriver to find food, they were eating hides, straps, and the soles of their shoes. The explorers found nourishment but realized the impossibility of returning upstream. So they drifted, hoping to reach the sea. We now know the Amazon has eleven hundred tributaries, with twenty percent of the world's river water. Orellana's voyage took sixteen harrowing months. Back in Spain he told of treasures and female tribes, after whom he named the river "Amazon." But his return to the region ended with losses of ships and men, and the river claimed Orellana, who drowned near its mouth. **9,759**

543 **WILLIAM JAMES** (1842-1910) philosopher of the American way

Americans consider themselves a practical people; James came up with a creed to match. James, brother of the novelist Henry James (557), was among the first to treat psychology as a science subject to laboratory testing. But what really shook up the academic establishments of Europe and America was his philosophy of pragmatism, which said any doctrine was true only insofar as it was useful—a notion that anticipated the relativism of the twentieth century. "It is absolutely the only philosophy with no humbug in it," James boasted. Friends loved his ebullience more than his ideas. One student described him as an "irresistible gust of life coming down the street." James thought religion was useful. Did he think it was true? He told his dying father his deepest hope was "that on the other side, dear, dear old Mother is waiting for you." But maybe he was just being pragmatic. **9,748**

544 **WASHINGTON IRVING** (1783-1859) America's first fiction writer

So legendary is Irving's association with Tarrytown, a New York village nestled in the Hudson

River valley, that residents recently renamed their shopping district after the writer's most famous fictitious setting, Sleepy Hollow. Tarrytown and its Dutch influences inspired much of Irving's quirky fiction, which helped him earn international fame in developing the short story as a respected literary form. Irving fostered an intriguing reputation as a man-about-town lawyer-turned-diplomat-turned-writer. His fiction's popularity was due in no small part to his uncanny knack for characterizing eccentrics and oddballs, like the pontificating, satirical Diedrich Knickerbocker, the pompous, gangly schoolteacher Ichabod Crane, and the ne'er-do-well somnambulant husband Rip Van Winkle. Named for the Revolutionary War hero George Washington (22), Irving enjoyed his first dubious success at writing when he traded English compositions to school chums for completed arithmetic homework. **9.733**

545 **PAUL GAUGUIN** (1848–1903) artist gone native

Gauguin the stockbroker left his wife and five children to be a vagabond painter. It's one of art history's most-told stories. Less known is how this insecure but megalomaniacal imitator pandered to anyone who could help him get an audience: impressionists Edgar Degas (482), Pierre-Auguste Renoir (384), and Camille Pissarro; Vincent Van Gogh's (158) art dealer brother Theo; hack journalists, and finally poet Stéphane Mallarmé, the leader of the symbolists. Mallarmé helped Gauguin obtain a government grant to go to Tahiti, and there he stopped imitating other painters and unleashed his genius. The eroticism and extravagant colors and shapes of his South Sea paintings—some depicting his Melanesian teenage wives—inspired the best of the twentieth-century artists who followed. "Everything I learned from

other people merely stood in my way," he wrote to a friend a month before he died of syphilis. **9.718**

546 **TECUMSEH** (1768–1813) chief chief

The Shawnee Indian leader organized a confederation of Great Lakes tribes to stem the flow of white settlers into Indian territory north and west of the Ohio River after 1800. (As a boy, he had played with white boys, including Daniel Boone, captured by his adoptive father.) Though the English supported his campaign, his grand alliance collapsed with his death in battle in 1813. It was probably doomed anyway; there were too many whites, and they were too well armed. Yet he pursued his hopeless cause with valor, believing he must resist a merciless foe. "Brothers," he told one gathering of Indian warriors, "the white people are like poisonous serpents. When chilled, they are feeble and harmless, but invigorate them with warmth, and they sting their benefactors to death." **9.701**

547 **JOHN KNOX** (1514?–1572) founder of Presbyterianism

The turning point in Knox's life was a fiery anti-Catholic sermon he preached to rebellious followers of a martyred Lutheran evangelist in 1547. "Others lopped the branches of the Papistry; he strikes at the root," one witness exclaimed. Thereafter Knox, a converted Catholic priest in Scotland, considered himself a prophet. Arrested, he spent nineteen months as a slave on a French galley. The ordeal broke his health but not his spirit; when a statue of the Virgin Mary was thrust into his face, he wrote, he "grabbed the idol, cast it into the river and said, 'Let her learn to swim.'" Knox went on to preach in England, befriend Calvin (69), and espouse radical ideas, from his denunciation of women rulers in *The First Blast of the Trumpet against the Monstrous Regiment of*

Women to his call for God-fearing men to take up the sword against godless rulers. **9,684**

548 MARGARET BOURKE-WHITE

(1904-1971) *photographer of life and times*

As a glamorous celebrity, Bourke-White helped change the image of the sleazy photographer, fueled in the 1920s by the first tabloid newspapers, into that of adventurer and artist. Although her shots of the human drama at German concentration camps in World War II are her most poignant, Bourke-White found the most satisfaction photographing industry. When publisher Henry Luce saw her pictures of steel factories, he invited her to join his fledgling magazine world, which eventually would include *Time*, *Life*, and *Fortune*. The military recruited her as a photographer in World War II, but her pictures also appeared in *Life*. When she asked permission to photograph the African invasion, the Pentagon wouldn't let her fly there because it was too dangerous. So she went by ship, and it was torpedoed. When she climbed into the life raft, she took a tiny camera and film instead of supplies. **9,649**

549 IBN KHALDUN (1332-1406)

medieval historian with modern ideas

In his book *The Universal History*, the Berber courtier and historian analyzed society, politics, and economics in scientific terms shockingly similar to the ideas, centuries later, of pioneering sociologist Auguste Comte (130), groundbreaking political scientist Charles-Louis Montesquieu (106), and revolutionary economist Karl Marx (14). Unfortunately, no great Western thinkers read Ibn Khaldun's book until the nineteenth century, when it was found in musty libraries. Still, the work shows how advanced Islamic civi-

lization was at a time when Europe remained in the grip of hidebound ideas. When he wasn't in a monastery thinking, Ibn Khaldun was a judge and adviser for rulers from Spain to Egypt. The sultan sent him on a diplomatic mission to Damascus in 1400, just as Mongol scourge Tamerlane (511) was arriving at the gates with his blood-thirsty minions. Ibn Khaldun, being both brilliant and prudent, paid homage to the conqueror and left on the next available camel. **9,620**

550 HANS CHRISTIAN ANDERSEN

(1805-1875) *the ugly duckling of children's literature*

Andersen wrote novels, plays, and travel books, but his exquisite fairy tales are what he's known for today, from "The Ugly Duckling" and "The Emperor's New Clothes" to "The Nightingale," "The Little Mermaid," and "Thumbelina." All were autobiographical. "Children," he said, "understood only the trappings." Andersen's insecure childhood scarred him. His grandfather and father went mad; his aunt ran a brothel. Despite later success Andersen always feared his disreputable background would be discovered. As a teenager, he left his Danish hometown to seek fame as a playwright. The effort failed, but a patron secured Andersen a grant to pay for his education. At age twenty-three Andersen resumed writing plays and won acclaim. His friends valued his wit and humor and tolerated his emotionalism—he overreacted to criticism by bursting into tears. "Bear with me," he wrote one close friend, "you know I have a screw loose." **9,612**

551 FÉLIX LOPE DE VEGA (1562-1635)

golden boy of the Spanish Golden Age

Lope's prodigious output—he claimed he wrote fifteen hundred plays; 470 survive—earned him

the title "Monster of Nature." His love life was like a monstrous French farce. He seduced wives, widows, actresses, and even the sixteen-year-old sister of the king's earl marshal. He renounced debauchery and entered the priesthood in 1614—but soon abandoned Sunday masses for Saturday night lasses. In his plays Lope abandoned convention for naturalness of structure and dialogue. We like the scene in *Peribáñez* where a bull, chasing a peasant, "kept him hopping like an Italian tightrope walker." And Lope's sixteenth-century description of sexual harassment in *Fuenteovejuna* is as powerful as any we've read:

*The knight's shadow falls where the maiden cowers,
She cannot avoid the searching eyes.
Why do you hide from me, sweet girl?
For my desires, lynx-eyed, can see through walls.*

9.598

552 SHAKA (c.1787–1828) founder of the Zulu empire

South Africa today numbers 8.5 million Zulu-speaking people—by far the largest ethnic group in a country of 36 million—mostly concentrated in a ten-thousand-square-mile tract along the Indian Ocean. Shaka built up the Zulu tribe after he inherited a tiny group with a ragtag army of about fifteen hundred men in 1816. He replaced soldiers' spears with knives for hand-to-hand combat; then he wreaked havoc. During the 1820s displaced clans who feared the Zulus clashed with each other in battles for land in southern Africa. By the time Zulu supremacy was established, two million people were dead. Shaka, insane with grief when his mother died, ordered the slaying of pregnant women, and cows so their calves could feel maternal loss. He banned milk, a staple of the Zulu diet, and forbade planting crops. His psychotic frenzy ended only when he was murdered by his half brothers.

9.561

553 JOSEPH CONRAD (1857–1924) novelist at the heart of darkness

He wrote of ships and seamen, but calling Conrad a spinner of sea stories is like saying Michelangelo (13) was an interior decorator. Conrad's adventure tales are about the big themes: love, death, redemption, and the meeting of East and West. A Pole born Józef Teodor Konrad Walecz Korzeniowski, he served in the English merchant marine for twenty years and learned English so well, he became a master stylist. He did not adopt English, he said. "It was I who was adopted by the genius of the language." His best book, *Lord Jim*, about a seaman who makes a life-haunting mistake, was a critical success, but it took four years to sell two thousand copies, some readers finding it difficult. Many still do. On first reading Conrad's dense prose, some high school students wail, as Mister Kurtz did in *Heart of Darkness*, "the horror, the horror."

9.545

554 ISADORA DUNCAN (1878–1927) ballet's liberator

The genius of Duncan's career has often been overshadowed by the legendary oddity of her death. She was strangled when her trademark flowing scarf tangled in the wheel of a sports car as she was riding along the Côte d'Azur in France. During her lifetime Duncan rattled the classical world of dance by challenging its rituals. She urged dancers to liberate themselves through free and sweeping movements unseen in classical ballet. She rejected tights, toe shoes, and tutus and danced barefoot in scarves and loose shifts. She took a few ballet classes but hated them. Her debut in Chicago in 1899 was a resounding flop, but her tour of Europe gained her many fans and followers. Duncan influenced traditional choreographers to loosen the movement in their dances, and she opened schools in Berlin, Paris, London,

and Moscow, to pass on her techniques to the next generation of dancers. **9,519**

555 FANNIE FARMER (1857-1915) *precision cook*

Whenever Farmer tasted an interesting dish, she'd wrap a sample in her lace handkerchief so she could take it home to figure out its ingredients. Farmer standardized measurements in recipes for her first cookbook, *The Boston Cooking School Cookbook*, published in 1896. As the school's director for eleven years, she taught cooks to measure ingredients accurately rather than haphazardly throw in a dash or a pinch. Her interest in ethnic cooking and regional specialties was reflected in her recipes. She was a primary force in the creation of an "American" cuisine. In simple language that any novice could understand, Farmer explained how to choose a melon, boil an egg, or cook a roast. After her death the cookbook was renamed for her. Still the bible in many kitchens, it has sold more than four million copies. **9,480**

556 MARTIN BEHAIM (c.1459-c.1506) *globe-trotting globe-maker*

Behaim was an erudite German merchant and mathematician who emigrated to Lisbon and claimed later to have taken part in Portuguese expeditions down the coast of Africa. When Behaim visited his hometown of Nuremberg in 1490, the town fathers were so impressed by his stories, they asked him to build a globe depicting the new discoveries. Still on display in Nuremberg, the *Erdapfel*, or earth apple, as they called it, proves that the flat earth theory was dying before Columbus's (2) voyage. Columbus didn't see the globe, but Magellan (42) had a copy when he set out to circumnavigate the world. A Behaim fan, German astronomer Hieronymus

Muntzer, wrote to King John II of Portugal (298) in 1493 suggesting that Behaim be hired to lead an expedition West to find Asia. Nice idea, but too late. Columbus had already tried it. **9,477**

557 HENRY JAMES (1843-1916) *novelist of the mind*

A master craftsman and innovative stylist, James helped launch the twentieth-century stream-of-consciousness movement and influenced authors from James Joyce (171) and Graham Greene to Joseph Conrad (553) and Virginia Woolf (441). Probing every nuance of his characters' psyches ran in the family; Henry's older brother was American psychologist William James (543). The theme of many Jamesian novels, including *Daisy Miller*, *The Portrait of a Lady*, and *The Ambassadors*, was the conflicting values between innocent America and sophisticated Europe. James became a transatlantic cultural figure after moving from the United States to England. His life was devoted to writing, and he never married. Gregarious at social gatherings, he could be aloof in private. Some critics found him too refined and passionless in his writing. "He is never in deep gloom or in violent sunshine," conceded Conrad. "But he feels deeply and vividly every delicate shade. We cannot ask for more." **9,469**

558 JEAN-BAPTISTE SAY (1767-1832) *incredibly ugly French economist*

We regret having to get personal, but everybody knows economics is the dismal science, and we feared losing your attention. Anyway, Say postulated—what else?—Say's law, which states that supply creates its own demand. Thus economic recession or depression has nothing to do with demand and everything to do with temporary disequilibria in production. Say's law held sway until John Maynard Keynes (201) repealed it

following the Great Depression of the 1930s. But it popped up again in the 1980s, reincarnated as President Reagan's supply-side economics. Maybe if Say had spent more time working on his theory, he would have perfected it, but he seemed to have trouble sticking to any single career, earning his keep variously as an insurance adjustor, journalist, bureaucrat, cotton-mill entrepreneur, and think-tank guru before settling down as an economics professor. (And, yes, he really was ugly.) **9.455**

559 **MARIE LACHAPPELLE** (1769–1821) *mother of modern obstetrics*

Male physicians started poking their noses into the process of childbirth in the sixteenth century. Then in 1721 a male midwife in London invented forceps. Used incorrectly, the instrument could be deadly to both mother and child. Enter LaChapelle, who persuasively argued that doctors and midwives should return to the ways of "natural childbirth." She believed professionals should intervene only when a serious problem occurred. As head of obstetrics at the Hôtel Dieu in Paris, LaChapelle argued against the use of forceps to shorten labor. The daughter of a midwife, LaChapelle trained midwives throughout Europe. Her three-volume *Pratique des accouchements*, the standard text for many years, chronicled some forty thousand cases, and promoted her laissez-faire treatment of childbirth but described intervention techniques for difficult cases. LaChapelle was the first obstetrician to immediately stitch up new mothers to repair the damage that nature caused. **9.437**

560 **GUSTAVE COURBET** (1819–1877) *art's radical*

The gentility reviled Courbet's paintings and his politics. The paintings were influential milestones in the history of realism—hunters killing stags,

portraits that showed warts and fat folds of flesh, pictures of the poor. When the prudish Paris salon of 1864 rejected Courbet's *The Awakening*, a picture of nude lesbians, his friend Jean Millet complained that the really indecent paintings in the show were the ones that appealed to stockbrokers and bankers. Courbet's politics were a mixture of aggressive anarchism, communism, and socialism. "What fabulous intercourse between a slug and a peacock, what genetic antitheses, what bristly slime, could have spawned the thing called M. Gustave Courbet?" novelist Alexander Dumas, Jr., wrote after Courbet was arrested for blowing up an imperial war monument during the aborted Paris revolution of 1870–71. Courbet's fame saved him from a firing squad. Free on parole, he went on painting. **9.431**

561 **PIERRE CORNEILLE** (1606–1684) *dutiful French dramatist*

Playwright Corneille was the father of French classical tragedy, a genre admired throughout Europe during the seventeenth and eighteenth centuries. He dropped Greek tragedy's conventions, with its heroes merely puppets of the gods. In his master work, *Le Cid*, as well as in *Horace*, *Cinna*, and *Polyeucte*, Corneille's characters confront impossible moral and emotional dilemmas but manage to prevail through judgment and will. With Corneille, love always runs a distant second to duty. "You must never allow love to reach the stage when you cannot help loving," Corneille wrote in the dedication to his first play. That was a prevailing theme in his thirty-two other eloquent plays, some of which are performed to this day. Corneille's career had astounding highs and lows. For two decades he was France's premier playwright. After 1659, however, the public tired of his heroic plots, and he was upstaged by younger rival Jean Racine (169). **9.408**

562 BENJAMIN SPOCK (1903-1998) the parents' pediatrician

Before Spock, experts preached rigidity. Behaviorist John Watson admonished parents to "never hug or kiss" their kids. Aw, go ahead, hug 'em, Spock advised. "Trust yourself. You know more than you think you do," he wrote in *Dr. Spock's Baby and Child Care*, published in 1946. The Connecticut-born pediatrician said parents should smile at, talk to, play with, and fondle their babies. His bible of parenting has sold fifty million copies worldwide, making it the second best-seller of all time after the real Bible. Not bad for a how-to tome that originated with an editor's remark, "It doesn't have to be very good, we're only going to charge a quarter." During the Vietnam War Spock became a peace activist, and critics accused him of spawning the youthful rebellion and drug culture of the 1960s with his "permissiveness." Nonsense, Spock retorted; he merely wished to treat parents like "sensible people." 9.395

563 ABIGAIL ADAMS (1744-1818) first lady of letter writing

What we know about the real people behind the American Revolution comes in part from Adams's letters. She was the *People* magazine of colonial America. Her lifetime of letter writing began with love notes to beau John Adams (214) then continued through his presidency. Although Adams hoped her letters would be tossed away as "trash," the more than two thousand that survive describe colonial politics and social life. "Remember the ladies," Adams, an early feminist, chided her husband at the Continental Congress. "Do not put such unlimited power into the hands of the Husbands. Remember all men would be tyrants if they could." The United States could have avoided more than a century of discontent if the Founding Fathers had heeded Adams's warning.

Numbered among the most influential first ladies, Adams was criticized for meddling. John Adams's secretary of state charged that the second president was "under the sovereignty of his wife." She died seven years before her son, John Quincy, was elected president. 9.371

564 RUBÉN DARÍO (1867-1916) savior of Spanish poetry

To break up a teenage romance, Darío's parents sent him from his native Nicaragua to El Salvador, and there he succumbed to his lifelong mistresses: poetry, and the alcohol addiction that eventually killed him. A friend gave him works by French symbolists Stéphane Mallarmé and Paul Verlaine, and Darío adopted their style, rescuing Spanish poetry from a stuffy romantic tradition. "I seek a form that my style cannot discover, a bud of thought that wants to be a rose," he wrote in his 1896 book, *Profane Hymns*. We laud him for the beauty of his work and because he was among the first Latin American writers to portray the United States as a mechanistic bully, an enduring depiction. In a poem entitled "Roosevelt," he wrote, "And though you have everything, you are lacking one thing: God!" 9.348

565 GEORGE FREDERIC HANDEL (1685-1759) the hallelujah man

Handel's superb oratorio, *The Messiah*, with its famous "Hallelujah" chorus, took twenty-three days to write. Some speculated he had divine guidance. "I did think I did see all Heaven before me," Handel conceded, "and the great God himself." Thirty years before, the brilliant German-born composer had won over England with his opera *Rinaldo*. He remained in London, composing forty operas and his celebrated *Water Music*, for George I. English disenchantment with operas in "unintelligible" foreign languages prompted

Handel to compose oratorios—large musical compositions for solo voices, chorus, and orchestra. Soon he made this the most popular musical form in England. Though *The Messiah* was not the last composition for this master of the baroque, it was his swan song. In failing health and nearly blind, Handel fainted in the orchestra pit during a performance of his master work on April 6, 1759. He died eight days later. **9,339**

566 CORNELIUS VANDERBILT (1794–1877) *money-making machine*

While Marx (14) brooded over the evils of capitalism, the wily Yankee Vanderbilt was turning a hundred-dollar investment in a leaky boat into a shipping and railroad empire worth \$100 million—serious money then. His trick was to cut prices and improve service, though his two first rules for business success were “1. Buy the railroad. 2. Stop the stealing that went on under the other man.” Frugality helped, too; Vanderbilt scribbled money orders on scraps of paper rather than buy preprinted checks. Though he was famous for saying “The public be damned,” he once helped prevent a financial panic by committing money to stave off speculators’ attempts to corner the gold market. At his fiftieth wedding anniversary, his son-in-law sang a ditty he had composed to honor the aging tycoon:

*In Wall Street he is a tornado;
He blows stock about as the dust;
When speculators have made their pie, Sir,
The Commodore breaks in the crust.*

9,303

567 JALAL AD-DIN AR-RUMI (c.1207–1273) *mystic founder of the whirling dervishes*

Rumi’s sons were so disturbed by their father’s devotion to a charismatic dervish (holy man)

that they had the dervish murdered. Rumi, a native of the region that is now Afghanistan, turned to poetry to explore his sorrow. Writing in Persian, he produced about thirty thousand mystical verses, which he often performed with a whirling dance. When Rumi found new love and devotion with an uneducated shopkeeper in the Konya bazaar, his free-form poetry again flowed—this time his *Mathnavi* was numbered among the Persian classics. In fact, the *Mathnavi* is still so popular that it is often sung. His ideas often contradicted one another, but Rumi wanted to explore the depths of clashing human emotions. He inspired many disciples who organized after his death into the Mawlawiyah order of whirling dervishes. His mausoleum in Turkey remains the destination of pilgrims. **9,280**

568 JEAN-BAPTISTE-CAMILLE COROT (1796–1875) “a rare genius and the father of modern landscape painting”

So said Eugène Delacroix (468), who took tips from Corot on how to paint trees. Obscure until his sixties, Corot lamented that his success came after his father’s death. “He resented my paintings and could never find anything good in it because it didn’t sell,” Corot said. Finally, after Napoleon III paid a hefty 18,000 francs for Corot’s *Solitude* in 1865, Corot’s landscapes became so popular that he was the most-forged painter of his time. If the forgery was good enough, Corot would sometimes lend his signature. He sought veracity with a dash of drama. “While aiming at truth and accuracy, let us never forget to clothe it with the appearance of what has touched us,” he wrote in 1856. He was humble and charitable. When artist Honoré Daumier (587) couldn’t pay his rent, Corot bought him a house. **9,275**

569 DUNCAN PHYFE (1768-1854) crafter of a furniture phyfedom

Before Phyfe, elegant furniture was imported from Europe. The Scottish-born cabinetmaker, who started life as "Fife," then changed the spelling perhaps to lure business from established French furniture firms in New York, opened a workshop there. Business boomed after the Embargo Act of 1807 prohibited European furniture trade. While other craftsmen imitated ornate French furniture, Phyfe developed a simple, graceful style. He disliked cabinets of ostentatious size, dubbing them "butcher furniture," and used rich mahogany imported from the West Indies. His furniture was expensive for the day—\$122 for a sofa, \$22 for a chair, and \$80 for a dining set. The distinctive Phyfe style, especially his lyre design in chairs and tables, is often imitated, but you have to visit a museum to see the originals. 9,261

570 BARTHOLOMAEUS ANGLICUS (fl.1220-1240) chronicler of knowledge, part two

Bartholomaeus, an English-born Franciscan friar, was a disseminator of knowledge, hastening medieval Christendom's intellectual awakening. His great *De Proprietatibus Rerum* (*On the Nature of Things*), begun in Oxford, polished in Paris, and completed in Germany, was meant as a tool for biblical study. Though generally ranked a shade behind the work of his contemporary Vincent of Beauvais (447), it marshaled in a single nineteen-volume set the opinions of the greatest Christian, Jewish, and Arab scholars of his time, as well as ancient Greek wisdom. Books one and two deal with God and the angels; books three through seven cover man, both body and soul; books eight through

eighteen examine the "corporeal substances"; and book nineteen treats the "accidents" of color, odor, taste, and liquidness. The encyclopedia was enormously popular, finding its way into libraries throughout Europe for centuries and getting translated into several vernacular languages from the original Latin. 9,248

571 OMAR KHAYYĀM (1048-1131) the tentmaker's poetic son

Omar billed himself as an astronomer. The modern world, however, knows him as the poet who said, "A jug of wine, a loaf of bread—and thou." Unfortunately, he probably didn't write it. Omar's poetry stock soared centuries after his death when his "quatrains"—poems consisting of four rhymed lines—were translated and embellished upon by Edward FitzGerald in *The Rubaiyat of Omar Khayyam*, published in 1859. Scholars differ on where Omar ends and FitzGerald begins, but they agree that at least 50 of the 250 verses can be attributed directly to the Persian. FitzGerald himself said that the "drink and be merry" theme that runs throughout his *Rubaiyat* showed that "the old Tentmaker, who, after vainly endeavoring to unshackle his Steps from Destiny, and to catch some glimpse of Tomorrow, fell back upon To-day." 9,233

572 EDWIN HUBBLE (1889-1953) astronomical heir to Galileo (4)

In the 1920s, the Missouri-born stargazer discovered the existence of galaxies beyond our own Milky Way and, even more astonishing to scientists, detected evidence for the universe's expansion that physicist George Gamow (674) would later use to formulate his Big Bang theory of creation. The Hubble space telescope is named after him, as is the Hubble constant that measures the velocities at which heavenly bodies are

flying apart. Who cares that Hubble was a vain-glorious self-promoter who lied about boxing French champion Georges Carpentier to a draw, faked two dueling scars on his face, and affected an English accent? To his credit, Hubble loved wild animals, was kind to underlings, and had the wisdom to renounce an early career as a lawyer. Besides, vanity is fleeting; Hubble's constant is, well, constant. **9,208**

573 SIMONE DE BEAUVOIR (1908–1986) *thinker for the second wave*

Hailed for feminist writings, Beauvoir considered them only one facet of her work: "I am a writer. I have written novels, philosophy, social criticism, a play—and yet all people know about me is *The Second Sex*." That classic treatise examined the second-class status of women and provided a theoretical framework for the international women's movement. To write it, Beauvoir plumbed her masterful knowledge of philosophy, economics, biology, literature, and sociology. Actually, she'd been preparing for years. Child of a proud bourgeois family, she had an embossed calling card by age three. Her autocratic father praised her for having "the mind of a man." Her parents' unhappy marriage made her compulsive about establishing order in chaos. One example: During her lengthy liaison with philosopher Jean-Paul Sartre, she was the one to introduce him to students he later seduced. Supporters dubbed them "the kingly couple"; critics called her "the most public sinner in all of France." **9,191**

574 OSCAR WILDE (1854–1900) *the wit that launched a thousand quips*

Wilde's greatest literary accomplishment was his play *The Importance of Being Earnest*, a farce brimming with epigrams that exposed the

hypocrisy of Victorian society. A fop who dressed in a velvet jacket, black silk stockings, and lavender gloves, the Irish dramatist had plenty of enemies, including American writer Ambrose Bierce, who called him the "sovereign of insufferables," and American painter James McNeill Whistler (762), who said he had "the courage of the opinions—of others." His two-year imprisonment for sodomizing an English lord won him a dubious place of honor in pederasty's pantheon. But he is most remembered for the quips that peppered his prose and public utterances. Samples: "I can resist anything except temptation;" "Nothing succeeds like excess"; and on his deathbed, the apocryphal "Either that wallpaper goes, or I do." **9,189**

575 GEORGE WYTHE (1726–1806) *America's first law professor*

As chair of law at the College of William and Mary from 1779 to 1790, this signer of the Declaration of Independence oversaw the evolution of American jurisprudence and articulated a court's right to overturn an unconstitutional law. We've argued that U.S. Chief Justice John Marshall (287) carved a powerful role for the Supreme Court on this basis, but guess who taught Marshall? Wythe also suggested that the federal government's power should be subservient to that of individual states. Sounds like Thomas Jefferson (64)? Guess who taught Jefferson? Wythe eventually left William and Mary and started his own school, where he mentored Henry Clay (936). After Wythe chose his nephew as heir, the nephew sprinkled arsenic into Wythe's coffee. The brilliant lawyer died, but not before he disinherited his scheming nephew. The only witness was a black cook whose testimony was discounted. The nephew went free. **9,167**

576 ZHOU ENLAI (1898-1976) *consummate diplomat*

A staunch Chinese Communist from his youth, he emerged unscathed from party purges and forced exiles. Zhou even managed to die before the infamous Gang of Four could discredit him. Charming, urbane, and astute, he was prime minister of the world's most populous country for twenty-five years. Among his achievements: arranging the historic meeting between Mao Ze-dong (50) and President Nixon (904) in 1972. But lest the West forget, this reasonable negotiator at the Geneva Conference in 1954 was the same man who approved the slaughter of millions of landowners at the start of the Communist revolution. To political writer Theodore White, this paradoxical man "could act with an absolute daring, with the delicacy of a cat pouncing on a mouse. Yet he was capable of warm kindness, irrepressible humanity, and silken courtesy." 9,151

577 WILLIAM WORDSWORTH (1770-1850) *wordsmith*

One of the great British romantics, Wordsworth is the poet of the dreamer, the wanderer, the oddball, the nature lover. And since we are all, sometimes, all of those things, we love him. His famous definition of poetry as the "spontaneous overflow of powerful feelings" found expression in lines like these:

*I wandered lonely as a cloud
That floats on high o'er vales and hills,
When all at once I saw a crowd,
A host of golden daffodils.*

Yet writing was such an ordeal, it gave him chest pains. Wordsworth, admirer of revolutionary France in his youth, Tory churchgoer in his old age, was a complicated creature. But his poetry was simple; he described ordinary events and

people at a time when poetry was cerebral and stale. Dismissed at first as a producer of "dawdling, impotent drivel," he lived to become an icon to the world. 9,129

578 GUSTAV MAHLER (1860-1911) *symphonic master*

Mahler told his analyst—Sigmund Freud (15) no less—that his musical mood swings were caused by a boyhood episode. Panicked by a nasty argument between his parents, he ran into the street and heard a hurdy-gurdy man playing the amusing "O Du Lieber Augustine." Let's hear it for transfiguring experiences. Mahler's nine and a half lush, long, and mercurial symphonies kept the classical tradition alive in central Europe and rival those of Johannes Brahms (353) as the darlings of today's symphony concert programmers. We like best the eighty-one-minute roller-coaster ride that is the Sixth Symphony. A riveting conductor, too, Mahler ran the New York Philharmonic until bossy benefactresses and mediocre players drove him home to Austria. There he met a new muse, his wife Alma, who had a talent for marrying artistic geniuses. After Mahler, she wedded architect Walter Gropius and writer Franz Werfel. She revealed years later that Mahler was as flat in the bedroom as he was sharp on the podium. 9,121

579 ANNA COMNENA (1083-c.1150) *witness to the Crusades*

The Alexiad, Anna's chronicle of the reign of her father, Byzantine emperor Alexius I, is a major source of modern knowledge about the First Crusade and its effect on Byzantium. It's also how we know that the Crusaders were free-booting louts, always vicious, and sometimes cowardly. Anna told how Bohemond of Normandy, to escape from a besieged town, had his death pro-

claimed, hid in a sealed coffin with a stinking, decomposing chicken, and was carried through enemy lines. At her father's funeral in 1111, Anna organized a coup to put her soldier husband Bryennius on the throne instead of her brother John. The rebellion fizzled, and Anna was sent to a convent where she took a pen and etched her name into the history of the Middle Ages. **9,085**

580 ANGELA MERICI (1474-1540) *the teaching nun*

We've tracked the roots of Catholic parochial education to Merici, founder of the Ursuline sisters. Orphaned at age ten, Angela studied as a Franciscan tertiary, the noncloistered religious who tended to worldly concerns. She had visions throughout her life; one showed singing women moving up and down a ladder while a voice said they were members of a religious order she would create. As the years passed, Angela devoted herself to educating Italy's poor children until she found a way to fulfill her dream. She trained women in Brescia, supervised orphanages, and established schools for former prostitutes. They were Catholic nuns' first formal classrooms. So if you had your knuckles rapped in third grade, or wake up in a sweat from a recurring nightmare that you forgot to give Sister Agnes Marie your term paper, thank Saint Angela. She was canonized in 1807. **9,066**

581 MILDRED "BABE" DIDRIKSON ZAHARIAS (1911-1956) *the greatest woman athlete*

On July 16, 1932, Babe singlehandedly won the national women's amateur *team* track championship as the only member of the Dallas Golden Cyclones, scoring thirty points to twenty-two for the second-place Illinois Women's Athletic Club, with twenty members. Another time she won six gold medals and broke four world records in one

afternoon, "the most amazing feat by any individual, male or female, in track and field history," according to one account. In the 1932 Los Angeles Olympics, the nineteen-year-old Didriksen won gold medals in the hurdles and the javelin. Turning to golf in 1933, she practiced until her hands bled, a display of tenacity that ultimately made her the world's greatest woman golfer, with seventeen straight golf championships in 1946 and 1947. Nicknamed for her idol Babe Ruth, she married a three-hundred-pound professional wrestler in 1938, scotching rumors she was a man. **9,061**

582 EAMON DE VALERA (1882-1975) *first prime minister of an independent Ireland*

A strange last name for an Irish hero, but then De Valera was not your typical Irishman. Born in the United States to an Irish mother and a Spanish father, De Valera was baptized Edward and adopted Eamon when he began public life. He was sent to live with relatives in Ireland after his father's death. De Valera fought in the 1916 Easter Rebellion against British rule and escaped a death sentence only because of his American citizenship. De Valera was elected to parliament as the candidate for Sinn Fein, the nationalist party. When he was sent again to prison, he escaped to America, where he sought financial support from Irish immigrants. A revolutionary parliament, the Dail Eirann, elected him president in absentia, and De Valera became the official head of government who ensured his country's independence after his party won a majority in the Dail in 1932. **9,024**

583 MAHMUD OF GHAZNA (971?-1030) *India's Islamic invader*

We last encountered Mahmud in entry number 356 as he was refusing to pay the gold he owed

to the poet Firdawsi for writing Islam's greatest epic, the *Shah-nameh*. Mahmud's cruelty to Islamic poets paled next to his cruelty to Hindu everybody. His armies swept into India sixteen times, sacking, raping, killing, and looting. In 1018, in a fever of Islamic zeal, he ordered the destruction of the Hindu temple of Mathura, a gold-and-gem-encrusted shrine that had taken two hundred years to build. Indian historians consider Mahmud a bandit, albeit a bandit with a big appetite. His effect, though, was to spread Islam deep into the Asian subcontinent, an accomplishment that led to the unceasing Hindu-Islamic rancor in that region since.

9,001

584 THOMAS MANN (1875-1955) *a magical mountain of talent*

The writings of the German Nobel prizewinner constitute an imaginative analysis of European culture. He established his literary reputation with *Buddenbrooks* in 1901, then followed with *Tonio Kröger* and *Death in Venice*. But his triumph is *The Magic Mountain*, a novel ranked with the finest works of art of the twentieth century. Protagonist Hans Castorp is a simple young German visiting his cousin at a mountain-top sanitarium when he, too, falls ill with tuberculosis. Castorp's visit stretches to seven years. As he interacts with other patients, Castorp grows spiritually, mentally, and emotionally. We soon recognize, however, that each of these patients represents a philosophy of Western culture. Mann touches on a host of issues: psychoanalysis and spiritualism; the links connecting art, disease, and death; the relative nature of time; the relations between artist and society. A gigantic tour de force. "Only the exhaustive is truly interesting," Mann said. Many readers agree.

8,998

585 MOHAMMED ALI JINNAH (1876-1948) *founder of Pakistan*

The name Gandhi (12) is known the world over, but even some educated Westerners draw a blank at the name of the man who created Asia's seventh-biggest country. In part, that is because most histories of the Indian independence movement have been penned by British and Indian scholars, who have played down Jinnah's role or portrayed him as a fanatic bent on carving out a separate Muslim state, whatever the cost in blood. And flow the blood did in the Hindu-Muslim massacres that accompanied the partition of British India. Ironically, Jinnah began his political career as an apostle of Hindu-Muslim unity but changed course in the 1930s. Lord Mountbatten, the last British viceroy, spent three hours alone with him in April 1947 in a desperate effort to preserve Indian unity, but concluded that "Mr. Jinnah was a psychopathic case." Four months later Pakistan was born.

8,972

586 MARY MALLON (1869-1938) *Typhoid Mary*

Everyone loved Mallon's cooking. Only trouble was, sickness followed her. From 1900 to 1907 the Irish immigrant cooked in six New York homes and one hospital. Forty-seven people fell ill, and three died from typhoid fever. Doctors hypothesized typhoid was spread by microscopic bacteria; then health investigators tracked the outbreak to Mallon. They isolated her on Quarantine Island in New York's East River. Newspapers dubbed her "Typhoid Mary." Two years later officials released her after securing her promise never to cook again. She lied. She was arrested after two more people died. Mallon, a healthy carrier of typhoid, lived another twenty-three years in isolation. She makes our list because, aside from being a

colorful legend, she illustrates the unresolved conflict between society's right to health and individual freedom. **8,951**

587 HONORÉ DAUMIER (1808–1879)
*skewer of the rich, the reactionary,
and the ridiculously bourgeois*

As he grew old, Daumier pined to be recognized as a fine artist, not as a caricaturist and draftsman. Sorry. Though the literary lion Honoré de Balzac (254) wrote of twenty-three-year-old Daumier, "there is something of Michelangelo in this youth," what makes this messenger-boy-turned-artist important are his sculptures and lithographs—four thousand of them. Collectively, they expressed his belief in democracy and equality and his hatred of France's rulers and ruling class. In 1832 he was sentenced to six months in jail for depicting King Louis Philippe as Gargantua feeding on office-seekers' gold. Characters invented by Daumier to personify stock manipulators, usurers, corrupt journalists, and exploiters of workers became fictional celebrities. Blindness ended his career, and he died poor. **8,937**

588 FRANCISCO DE MIRANDA (1750–1816)
torchbearer of Latin American liberty

The dashing Venezuelan was an early inspiration to Simón Bolívar (48), liberator of South America. Miranda dreamed of freeing Latin America from Spanish domination. To Yale president Ezra Stiles, Miranda was "a learned man and a flaming son of liberty." After two decades of appeals to world leaders, this charismatic and eloquent dandy won British support. He sailed a ragtag crew to Venezuela in 1806, but peasants refused to rally round and Miranda retreated. A second break came in 1811, when revolutionary leaders summoned him to Venezuela to lead their forces. With independence secured, Miranda assumed

dictatorial powers. But the Spanish counterattacked, Miranda declared himself "struck to the heart" when Bolívar's negligence lost a key fort to the enemy, and Miranda surrendered. He tried to flee but was captured and nearly killed by a seething Bolívar, his former general. **8,928**

589 ROBERT OWEN (1771–1858)
Utopia's draftsman

After improving the workers' lot at his cotton mills with such innovations as free medical care, Owen launched his most famous experiment, a cooperative village in New Harmony, Indiana, in 1825. Populated by intellectuals, reformers, and crackpots who, one historian said, were more inclined to furrow their brows than the fields, the community collapsed three years later. Undeterred, Owen returned to Britain and got involved in the workers' movement, eventually heading a national trade-union federation before it, too, fell apart. Owen preached an atheistic social doctrine with an oddly religious edge, frequently announcing the arrival of a new millennium of peace and brotherhood. In his later years he took up spiritualism, claiming he had spoken with the ghosts of Thomas Jefferson (64) and the Duke of Kent. Whatever his failings, his campaign to ameliorate factory conditions early in the Industrial Revolution had an enduring impact on governments' social policies. **8,918**

590 RASHI (1040–1105)
*interpreter of the Bible
and the Talmud*

The stories about Rashi probably aren't true, but they make good legend. For example, Rashi's mother was pregnant when she was crushed against a wall by two carts. The wall miraculously formed a protective niche around her belly. Another story says Rashi nursed a sick monk who

later became a Catholic bishop and protected Jews from annihilation to return the favor. What we do know about Rashi is that he was born Solomon ben Isaac and trained as a rabbi. Lacking family riches, he worked in French Champagne vineyards. He wasn't an eminent thinker like Maimonides (132), but his commentaries are important even today because he simplified complex Talmudic thoughts and explained confusing Bible passages. He was smart enough to know when he was out of his league. "I do not know what it is," he wrote on more than one occasion. **8,884**

591 LU HSÜN (1881-1936) *greatest modern Chinese writer*

A medical student in Japan during the Russo-Japanese war, Lu Hsün saw a newsreel of the execution of a Chinese spy and was appalled that the Chinese spectators depicted in the film showed no anger or shame. At that moment Lu Hsün decided that waking up his countrymen's souls was more important than healing their bodies. His writing received little attention until 1918 when his short story, "Diary of a Madman," caused a sensation by attacking Chinese cruelty, hypocrisy, and commitment to outworn traditions. The madman reads a history book that extols Chinese benevolence, but hidden in every line are the words "eat men." Later, in "The True Story of Ah Q," Lu Hsün mocked peasant revolutionaries, but in 1929 he joined the Communist Party. No wonder the Chinese now consider him their most important modern writer, though even anti-Communists agree that Lu Hsün's deification is warranted. **8,867**

592 HENRI CARTIER-BRESSON (b. 1908) *photography's decisive moment*

Frenchman Cartier-Bresson raised photojournalism to an art form. He intended to be a

painter until he acquired a 35-millimeter Leica. It soon became, he said, "the extension of my eye." For forty years, as he traveled throughout the world, that eye captured poignant scenes of humanity: a Gestapo informer heckled by jeering French; the saucy gazes of two Mexican prostitutes; a working-class family picnicking by the Marne. "He sees through the lens as a sniper sees through the telescopic sight on his rifle," said historian Peter Pollack. And like a hunter, he preferred camouflage, applying black tape to shiny parts of his camera to make it less noticeable. Cartier-Bresson believed in the "decisive moment" in picture taking. "Photography," he said, "is the simultaneous recognition in a fraction of a second of the significance of an event." **8,859**

593 BERTRAND RUSSELL (1872-1970) *British jack-of-all-intellectual-trades*

His influence lay in his ability to force his unorthodox views into the social mainstream. A brilliant mathematician, Russell, an atheist, found comfort in that discipline's "cold and austere beauty." He churned out scores of books, from *The ABC of Atoms* to *Marriage and Morals*. Married four times, he "pursued anything in skirts," according to his friend Sidney Hook. His greatest fame came from his social activism. Imprisoned for pacifist activities in World War I, he switched ground to urge a preventive war against the Soviet Union in the late 1940s, only to turn into a nuclear-disarmament advocate with an anti-Western bent. Russell declared that British and American leaders "Macmillan and Kennedy are fifty times as wicked as Hitler." And in the late 1960s he and other leftist grandstanders convened the International War Crimes Tribunal to denounce American intervention in Vietnam. **8,851**

594 WILLIAM OF SENS (d.1180) *cathedral builder*

History has recorded little about the master builders who designed the world's great cathedrals at Chartres, Paris, Mont-St.-Michel, and elsewhere. We are in a position to pay homage here to William of Sens because his rebuilding of England's Canterbury Cathedral after a fire in 1174 was documented by a scribbling monk. Gervase, who witnessed the blaze, described in his diary how William came from France to rebuild the choir and expand the church. William's innovations, especially his use of contrasting stone in the interior, coupled with some interesting flying buttresses that owe their design to Paris's Notre Dame, can still be seen at Canterbury. In 1178 William barely survived a fifty-foot fall from scaffolding, but for a time he directed the construction from his bed. Then the project was passed on to yet another William—known to history simply as “the Englishman.” **8,832**

595 ANTHONY OF PADUA (1195–1231) *most-prayed-to saint*

Since the seventeenth century countless Catholics have appealed to Saint Anthony to help locate lost objects. Many swear he's come through. Some say this started after a novice borrowed Anthony's psalter without permission, then saw a fearful apparition. During his lifetime, however, Anthony's mission was finding lost souls. This priest from a noble Portuguese family dreamed of martyrdom at the hands of Saracens in Morocco, but poor health prevented him from traveling that far. He became a Franciscan and preached the word closer to home, in France and Italy. With his fine voice and charisma, he drew overflow crowds that could be accommodated only in marketplaces. Anthony died at thirty-six, exhausted by his

heavy workload. He was canonized in 1232. His devotion to the poor inspired the nineteenth-century institution, St. Anthony Bread, a fund for the needy that continues today, especially in developing countries. **8,821**

596 EISAI (1141–1215) *tea-totating monk who brought Zen Buddhism to Japan*

Our idea of a great ritual is an annual martini on New Year's Eve. Still, we want to toast the man who authored *The Essentials of Tea Drinking*, in which he described for the shogun the use of tea to maintain health and ensure longevity. Today, remnants of his methods can be found in the formal Japanese ceremony, which was perfected in the sixteenth century by Sen No Rikyu. The ritual *Chanoyu*, which literally means tea's hot water, uses tea to promote harmony, peace, and one perfect moment. Eisai spent four years studying at the Song monasteries in China and then returned to Japan and founded the Rinzai Sect of Zen Buddhism in his native land. He also brought home tea seeds that are believed to be at the root of much of Japan's tea crop. Variations of Eisai's tea method became so popular that the fourteenth century Buddhist monk Ikkyu observed one could find enlightenment more quickly in a tea ceremony than from hours of meditation. **8,802**

597 RAMAKRISHNA (1836–1886) *Hinduism's charismatic leader*

The Hindu holy man Gadadhar Chatterji was born into a poor Brahman family. He suffered epileptic seizures, standing stock-still for long periods, and in adulthood he sank into trances anytime. His immersion in Islam produced a vision of Muhammad; his study of Christianity made him “see” Jesus Christ. He concluded that

all religions are essentially the same and valid. This revered wise man could also be most human. Calcutta elite were shocked when Ramakrishna burst into childlike laughter and dance, and spoke the coarse dialect-spiked obscenities natural to his village. He had no patience with rituals of the faithful in which they twisted their bodies like pretzels to gain mystical insights. "Shun them like filthy excrement," he said of yoga exercises. His follower, Vivekananda, helped spread the master's teachings through the Ramakrishna Mission, a religious society that today continues its educational and philanthropic work throughout the world. **8,796**

598 MINAMOTO NO YORITOMO

(1147-1199) *Japan's first shogun*

Yoritomo established a system of rule by feudal lords that lasted seven hundred years. His story starts with the rivalry between the Minamoto and Taira clans. Their clashes were particularly grisly. One example: Minamoto legions raided a palace, setting it afire. Nobles, courtiers, and ladies-in-waiting fled. "When they rushed out, so as not to be burned by the fire, they met with arrows," one account said. "When they turned back, they were consumed by the flames." The Taira eventually won that round. But in the Gempei War, Minamoto no Yoritomo led his faction to victory in 1185, crushing the Taira in a sea battle. He then established constables and district stewards in the provinces, thus undermining the central government's local control, and took the title of shogun, or supreme commander. **8,768**

599 NICOLÁS DE OVANDO

(1491-1511) *West Indies tyrant*

Ovando established the cruel system of exploitation of natives in the Americas that was copied

throughout Spanish America. The callous Spanish nobleman arrived in Santo Domingo in 1502 to govern the Spanish colonies in the West Indies; he brought with him more than two thousand settlers and the largest fleet the New World had ever seen. The natives, however, refused to work for the occupying force, and colonists soon dubbed them "dirty dogs." Ovando's soldiers tracked down and killed Indians who sought to escape, including their princess, Anacaona. Under the *encomienda* system, the defeated natives were forced to work the settlers' estates in exchange for food and security. When word reached Spain of Ovando's brand of brutality, he was recalled. Even in those days, though, he got a book deal out of it. **8,737**

600 DOUGLAS MACARTHUR

(1880-1964) *the general who had a great fall*

World War I hero, victorious World War II general, benevolent despot of occupied Japan, scourge of Asian Communism, nationalist idol, MacArthur veered dangerously close to Bonapartism in old age but, being an American, became a businessman instead. It was MacArthur who uttered the defiant vow, after being driven out of the Philippines by the Japanese, "I shall return!" And it was MacArthur who, fired by President Truman (485) for insubordination in the Korean War, nearly triggered revolution in the streets with his farewell speech to Congress that quoted an old barracks ballad: "Old soldiers never die, they just fade away." Popular adulation waned, however, after the septuagenarian general faded into a lucrative job as head of the Remington Rand Corporation. MacArthur wanted to drop fifty atomic bombs on China. Truman scorned him as "Mr. Prima Donna, Brass Hat, Five Star MacArthur." In that battle of titans, happily, Truman prevailed. **8,711**

Call them, if you will, the fomenters of quiet revolutions; These statesmen, writers, teachers, environmentalists, and humanitarians discovered their noble callings—or had their causes thrust upon them—and remained true to their messages no matter what the fallout.

On the following pages you'll meet a few of the millennium's great moral voices. One is Russian writer Aleksandr Solzhenitsyn, who endured eight hellish years as a political prisoner in the Soviet gulag and lived to write his vengeance. Another, fiery French novelist Émile Zola, swayed his countrymen with a dramatic open letter pleading for justice for the unjustly accused Alfred Dreyfus.

German doctor Albert Schweitzer inspired the world with his selfless devotion to the sick and lame of Africa, and with his philosophy of reverence for all living things. Undersea explorer Jacques Cousteau had the same deep respect for nature. In films of his many underwater explorations, Cousteau kept hammering away at the verdict few wanted to accept: The industrial world was endangering the earth's oceans with its wastes.

Some of the notables in the next pages bettered the lives of the disabled. Elizabeth Kenny, a pioneer in physiotherapy, created soothing massages and exercises to help the paralyzed. And the Frenchman Abbé de L'Epee wanted to extend the Christian message of salvation to deaf students but first had to learn to communicate with them. He devised a manual alphabet that enabled these children to study the same academic subjects as hearing youngsters.

Blessed, too, are the pure of heart: German Protestant theologian Dietrich Bonhoeffer opposed the Nazis during World War II and could have saved himself by remaining in America. Instead, he chose to return to his native land and stand with his compatriots. He was executed weeks before the war's end, but his ecumenical spirit lives on.

601 WILLIAM OF OCKHAM (c.1285–c.1349) *sharp-witted philosopher*

The Englishman developed a fundamental principle of modern thought: Once a problem has been solved, additional solutions are unnecessary. It's called "Ockham's razor" because it shaves a lot of time-wasting work. Just as important was Ockham's view, new in its time, that objects had no universal meaning independent of their existence. The concept, called nominalism, is a philosophical seedling of the empiricism that flowered in the Renaissance. Ockham was a Franciscan monk who taught at Oxford, but in 1328 he took refuge with Holy Roman emperor Louis IV to escape punishment for teaching heresy about transubstantiation, the belief that bread and wine are transformed into the body and blood of Christ. For an explanation of Ockham's heresy, see our next book, *1,000 Years, 1,000 Religious Disputes That Are Incomprehensible Today*. **8,692**

602 KING GILLETTE (1855–1932) *speaking of razors*

For most of the millennium cutting whiskers with a straight razor was a chore and often a bloody one, except for those who could afford to hire barbers. Then came Gillette, a bottle-cap salesman from Boston with the capitalistic dream of inventing a product, any product, that customers would have to buy over and over. He claimed that he got the idea for the safety razor and disposable blade while he was shaving, and in 1904 he patented the system that changed the face of, well, faces. The Gillette Safety Razor Company blade was sharp because it was thin and flexible, and customers kept coming back because the blades were only a couple of cents each. The invention made Gillette a millionaire, but only briefly. He was shorn of his fortune by the Great Depression. **8,662**

603 ROWLAND HILL (1795–1879) *the post's impressionist*

Hill created the modern postal system. Letters used to be postmarked by hand and postage was paid by the receiver, not the sender. Hill, a teacher, envisioned a system that used a "bit of paper just large enough to bear the stamp and covered at the back with a glutinous wash"—in other words, a postage stamp. Hill's plan included a standard fee for delivering a letter—a penny—no matter what the distance throughout his native England. Britain's first stamp featured a profile of young Queen Victoria. Because it was difficult to see a cancellation on the "penny black," the ink was switched to red. Millions of the penny reds imprinted with a teenage queen circulated during Victoria's long reign. In 1842 Hill's idea caught on in the United States when a New York postmaster began selling a stamp with George Washington on its face. **8,649**

604 JOHN R. PIERCE (b. 1910) *space-age networker*

With live television coverage of a missile attack on Kuwait or police storming a rebel stronghold in Peru, the world is in our living rooms. Communications satellites whirling through space link continents like a vast electronic spider web. Pierce gets our thanks for starting the process. An engineer at Bell Labs in 1936, he improved the traveling-wave tube, the most common source of microwave power for transmitting signals from satellites. His paper envisioning unmanned communications satellites spurred the 1960 launch of the experimental balloon, *Echo I*. Two years later the first commercially funded satellite, *Telstar I*, was launched into orbit and relayed data, voice, and television transmissions. In August 1964 *Syncom 3* made history by transmitting the Olympic Games from Tokyo. To

Pierce, this was déjà vu. A lifelong writer of science fiction, he'd built plots around such space-age communications back in high school. **8,635**

605 JOSEPH HENRY (1797-1878) *the thinker who didn't tinker*

If he had been interested in the practical application of his groundbreaking research, Henry might have built the first intercity telegraph, the first telephone, maybe the first commercial electric motor. Instead, as biographer Thomas Coulson wrote, "Like a child he went on asking 'Why?' without seeking a final answer." Henry's greatest discovery was self-induction, which makes possible the transmission of electrical pulses through long wires. He built the first laboratory-size electromagnetic telegraph, and when Samuel Morse (329) was having trouble making his Washington-to-Baltimore line work, Henry helped with technical advice, such as using glass to insulate the relays. Electromagnets perfected by Henry were central to Alexander Graham Bell's (74) telephone. After working at Albany Academy and Princeton University, Henry finished his career at the Smithsonian Institution. President Lincoln (32) had reviled the Smithsonian as a warehouse of useless curiosities. But after he met Henry, the president declared: "It must be a grand school if it produces such thinkers as he is." **8,591**

606 GEORGIA O'KEEFFE (1887-1986) *artist of the American Southwest*

The willowy O'Keeffe once was hounded by a fellow art student who was determined that she pose for him. "It doesn't matter what you do. I'm going to be a great painter, and you will probably end up teaching painting in some girls' school," he warned. Eugene Speicher (Eugene who?) erred on both counts. Although women artists of previous generations had indeed been the captives of

classrooms, O'Keeffe took a different route. She destroyed all her paintings just before her thirtieth birthday because she thought they were unoriginal. Then she found inspiration in the New Mexico desert. She painted haunting scenes of the landscapes she found there, as well as her seductively sensual, decidedly female flowers. This passion for painting, coupled with her marriage to photographer/gallery owner Alfred Stieglitz, who nursed her talent and managed her career, sealed O'Keeffe's destiny as an American original. **8,569**

607 ÉMILE ZOLA (1840-1902) *writer who told it like it was*

He founded the naturalist school of fiction with his objective, almost scientific probes into the dark corners of a character's life. This led critics to label his works pornographic. His first book, *Thérèse Raquin*, spurred his publisher-bosses to order him to stop writing or quit. He quit. His twenty-novel cycle, *The Rougon-Macquart*, is one family's social history, and each novel presents a different profession, trade, or class. Of these, *Nana*, a study of prostitution, caused a scandal; and the leftist-leaning *Germinál*, an exploration of mining conditions, was a novel of class warfare. While Zola defended Manet (301) and other impressionist artists, he's best known for his open letter, "J'accuse," which helped win a new trial for Alfred Dreyfus, a Jewish army officer unjustly accused of treason in an anti-Semitic climate. "When truth is buried underground," Zola wrote, "it grows, it chokes, it gathers such an explosive force that on the day it bursts out, it blows up everything with it." **8,567**

608 ROBERT BROWNING (1812-1889) *perfecter of the dramatic monologue*

A major poet of the Victorian era, Browning created psychological studies in verse that

influenced the writings of poets Ezra Pound (367) and Robert Frost (828). Consider this Browning dialogue in the chilling, "My Last Duchess": The duke, peering at a portrait of his late wife, tells a visitor, "Oh Sir, she smiled, no doubt, / Whene'er I passed her; but who passed without / much the same smile? This grew; I gave commands; Then all smiles stopped together." Browning won greatest fame for *The Ring and the Book*, a chronicle of a seventeenth-century Italian murder trial. To novelist Henry James (557), Browning had two personalities: bon vivant of London society and fiercely private artist. In 1846 Browning married the poet Elizabeth Barrett (759) after a courtship kept secret from her domineering father. They moved to Italy for her health. Their happy, though complicated, union lasted sixteen years—until Elizabeth's death in Browning's arms. **8,541**

609 CHARLES GOODYEAR (1800–1860) *tire squire*

Goodyear was a hapless manufacturer who was periodically jailed for debt because he put his capital into products nobody wanted, such as natural rubber mailbags that turned to mush. Then in 1839 he discovered vulcanization, a process of applying hot steam to chemically treated rubber. No longer did rubber ooze in summer, freeze in winter, and stink all year around. Vulcanization made Goodyear a big wheel in the history of industry. What would cars and bicycles ride on without rubber tires? Tinkering was in Goodyear's genes. His father invented Goodyear's Patented Spring Steel Hay and Manure Fork, a winning item in 1812. Suits over patent rights to vulcanization threatened to make Charles Goodyear's waning years depressing, but he bounced back after he hired a good lawyer, Daniel Webster. **8,519**

610 MARY STUART (1542–1587) *Queen of Scots*

Was she history's tragic figure or a scheming adulterer-turned-murderer? Catholics loyal to Mary were willing to overlook rumors that she killed her husband after she took a lover. Protestants abhorred Mary for her vampish role in sixteenth-century intrigue. A great beauty, Mary was a statuesque five foot eleven with amber eyes and copper hair. Queen of Scotland since infancy, she grew up in France and married Francis II, son of King Henry II and his queen, Catherine de Médicis (632). When he died, Mary returned to Scotland a refined Frenchwoman uncomfortable with her country's earthy lifestyle. After the birth of son James (879) and her second husband's murder, Mary was imprisoned for eighteen years for her involvement in plots to overthrow her cousin, Elizabeth I (31). Elizabeth eventually ordered Scotland's femme fatale beheaded because the mere fact that Mary lived gave England's Catholics reason enough to plot treason. **8,475**

611 ALEXIS DE TOCQUEVILLE (1805–1859) *the Homer of America's odyssey*

French aristocrat Tocqueville's observations on the new republic form *Democracy in America*, one of the greatest political treatises ever written. Under the guise of studying America's prison system, Tocqueville arrived in New York in May 1831 intent on learning what made this country tick. For nine months he and Gustave de Beaumont traveled by horse, steamer, and stagecoach from Boston to New Orleans, searching for the essence of democracy. Beaumont focused on race relations. Tocqueville targeted politics. His analysis was astute (even then he noted "the ablest men are rarely placed at the head of affairs"), but he sometimes stumbled. Ultimately, Tocqueville predicted, the equality of America would spread to

Europe. "To attempt to check democracy would be to resist the will of God," he wrote. **8,472**

612 ROBERT SWANSON (b. 1947)
*entrepreneur who launched
the biotechnology revolution*

Swanson was a twenty-nine-year-old former frat rat when he cofounded Genentech in 1976 with gene-splicing pioneer Herbert Boyer. The company, conceived over beer in a San Francisco pub, spawned the biotechnology industry of genetically altered products. Genentech's products, ranging from a blood clot buster to a human growth hormone, accounted for nearly half of those on the market in the late 1990s, and scores of its scientists started their own firms. Swanson has his lighter side, manifested in antics like showing up at Genentech's Friday afternoon beer bashes in a grass skirt. When we last looked, the MIT-trained chemist headed a company that was trying to make drugs capable of switching off disease-causing genes. "It's people who make the difference," he once said, "people who have dreams of catching the big fish." **8,451**

613 LOUIS IX OF FRANCE (1214-1270)
Saint Louis the king

Louis was a monarch at twelve, and his wise mother, Blanche of Castile (694), taught him to love God and humanity, though Louis made an exception for Muslims and for French nobles who disturbed the peace. In 1250, after quelling unrest in France, Louis went on a Crusade, but the Arabs captured him and extracted a ransom equal to a year of royal income. He went again twenty years later, caught a fever, and died. Louis wore simple clothes and denied himself such pleasures as salt, and he was that rare medieval royal who liked to read books. His blend of piety, physical courage, and intellect made him a

model king to generations of admirers, though his canonization in 1297 was mostly a political act. Pope Boniface VIII (837) gave him a halo to appease a potential enemy, Louis's grandson, King Philip IV. If looking at famous skulls is your idea of fun, visit Louis's in the treasure room of Notre Dame cathedral in Paris. **8,427**

614 HELENA RUBINSTEIN (1882-1965)
empress of beauty

Cleopatra may have used eyeliner and rouge to lure Mark Antony, but by 1900 good girls no longer wore makeup. Today the cosmetics industry is worth \$6 billion annually. Who changed women's minds? Rubinstein. The Polish native studied medicine but switched to cosmetics after she emigrated to Australia in 1902. There her family's face cream was a big hit—in large part because Rubinstein relied heavily on advertising. By 1915 she had salons in Paris, London, and New York. Her polished look found a ready market with modern women who were raising their hemlines, cutting waist-length tresses, shedding whalebone corsets, lobbying for suffrage, and working in factories and offices. Called the Princess after she married royalty, Rubinstein coined nicknames for her competition: Charles Revson of Revlon was "The Nail Man," while she contemptuously referred to Elizabeth Arden as "the Other One." **8,401**

615 SERGEY PROKOFIEV (1891-1953)
twentieth-century traditionalist

Prokofiev was a prolific composer, penning symphonies, concertos, operas, ballets, program pieces, and film scores. A prodigy who was writing music at age six, he left Russia in 1918 during the revolution. First stop, the United States, where his now well-known opera, *The Love for Three Oranges*, nearly bombed in the

Big Apple. Critics, Prokofiev snarled, were "a pack of dogs." Disillusioned, he moved to Western Europe, then returned to the Soviet Union of Joseph Stalin (82). While his early works had been modern and dissonant, he now shifted his style to the lean and near-classical. However, he resisted the Communist regime's pressure to compose only works of social realism. Prokofiev's output remained monumental, including the symphonic fairy tale *Peter and the Wolf* and the ballet *Romeo and Juliet*. Still, Stalinists censured him for "modernistic techniques." Eventually, the composer's workaholicism weakened his health, and he died just three hours ahead of Stalin.

8,397

616 IAN WILMUT (b. 1944) world's first cloner

In 1997 Wilmur, a British embryologist, created a lamb named Dolly using DNA from an adult sheep. The feat stunned the scientific world—an American biology professor scrambled to revise a book that said it couldn't be done—and raised visions of carbon-copying animals capable of producing prodigious quantities of milk, wool, proteins for drugs, even organs for humans. But critics said "Bah!" to Dolly's *ba-a-a-h*. They worried somebody would try to clone people. In no time one American researcher declared his intention to do just that. "I would find that offensive," Wilmur said, as if the idea had never occurred to him. Others mulled the possibilities of duplicating Michael Jordan (903) or Mother Teresa (772). A Jesuit priest hastened to declare that a cloned human would have a soul. Wilmur, a reclusive sort with a penchant for solitary strolls in the Scottish mountains and a nobody until his deed was publicized, said all he wanted was "to understand things." Goodbye Frankenstein, hello Dolly.

8,368

617 NICCOLÒ PAGANINI (1782–1840) virtuoso of all virtuosos

A Viennese concert-goer insisted he spotted the devil perched on Paganini's shoulder during a recital. How else to account for the cadaverous-looking but loose-limbed Genoese violinist's supernatural skills and eye-popping performances? He played the highest notes and harmonics with clarity and moved his bow so dexterously, his Guarneri-made violin sometimes sounded like a mini-orchestra. Paganini hyped his evil image by not denying wild stories that he ravished women and performed black magic, but those tales were mostly myth. An evil man wouldn't have given 20,000 francs—a lot of money, then—to impoverished, yet-to-be-recognized Hector Berlioz (671), as Paganini did. Paganini's compositions, notably the pyrotechnical twenty-four caprices, challenged generations of stringed-instrument players to match his skills. No one succeeded, except maybe twentieth-century violinist Jascha Heifetz, but trying made them better players.

8,347

618 CHRISTINA ROSSETTI (1830–1894) the poet's poet of Victorian England

"I wrote such melancholy things when I was young that I am obliged to be unusually cheerful and robust in my old age," Rossetti once said. She wasn't kidding. How's this for starters?

He did not love me living; but once dead

He pitied me; and very sweet it is

To know he still is warm though I am cold.

Filled with haunting, sensual images of love, death, illness, and loneliness, Rossetti's poetry found an enthusiastic audience in the Pre-Raphaelite Brotherhood, a band of artists who worked together to unite painting and poetry. As a woman, Rossetti never had official membership in the group; her relationship to it was through

her brother, Dante Gabriel, himself a poet and painter of some note, though not of Christina's stature. We include the reclusive, introverted Christina for her position as England's greatest female poet. **8,322**

619 NIKITA KHRUSHCHEV (1894-1971) *first human Soviet leader*

After Stalin's (82) horrors, Khrushchev's reign from 1953 to 1964 was almost fun. Certainly this plain-spoken miner's son, who taunted the West by declaring, "We will bury you," and pounded his shoe on a table at the United Nations, was colorful. But his great accomplishment—de-Stalinization—was deadly serious. It began in his secret speech to the Communist leadership in February 1956, denouncing Stalin's brutalities. "Peaceful coexistence, different paths to socialism, revolution without violence, and the abandonment of the doctrine of the inevitability of war: the Soviet Union formally renounced her role as the spearhead of violent revolution," said historian Edward Crankshaw. The next eight years were action-packed: The Hungarian Revolution was crushed; Sputnik was launched; Khrushchev toured America; the Chinese-Soviet alliance collapsed; the Berlin Wall rose; the Cuban missile crisis erupted; the superpowers signed a nuclear test-ban treaty. An ousted Khrushchev then wrote his memoirs. **8,310**

620 REGIOMONTANUS (1436-1476) *mathematician with the right angle*

His name is Latin for "from Königsberg," or royal mountain, his hometown in Germany. Copernicus (18) and other stars of Renaissance astronomy built on work by Regiomontanus, notably his *On Triangles of Every Kind*, published fifty-seven years after his death. "Knowing these ideas will open the door to all of astronomy and

to certain geometric problems," he wrote. The book was full of easy solutions to important problems, such as how to measure the right angles of triangles. He found errors in translations of Ptolemy's *Almagest*, a second-century book that placed the earth at the center of the universe. Regiomontanus's math helped later scientists prove that even the correctly translated Ptolemy was wrong. A quarrel with a fellow savant forced him to flee Rome in 1468, but he was welcomed in Austria, Hungary, and Germany, and he went back to Rome in 1472 to be science adviser to Pope Sixtus IV. **8,287**

621 ANDREAS MARGGRAF (1709-1782) *sweetie pie of the sugar industry*

The U.S. Department of Agriculture estimates the average American consumes sixty-five pounds of sugar annually. That's an awful lot of bonbons. We rooted out Marggraf, a German who extracted sugar from beets in 1747—a discovery that eventually spawned the multibillion-dollar sugar industry. Marggraf learned chemistry from his father, the court apothecary in Berlin. He figured out how boiling alcohol could coax the juice right out of the beet. The crystals that formed were identical to cane sugar. His discovery was important because beets grew well in Europe (and the United States, for that matter), while cane sugar, the previous sole source of sugar, needed a balmy climate. Marggraf's success in the laboratory extended far beyond this discovery. A pioneer in analytical chemistry, he was first to use a microscope in the laboratory to analyze elements. How sweet it is! **8,261**

622 CHARLES MICHEL DE L'ÉPÉE *(1712-1789) hero of the deaf*

Deaf people always were able to communicate with one another using basic hand gestures. It

was the hearing who felt left out. Then came Abbé de l'Epee, who taught deaf children a manual alphabet, the better to learn academic subjects. He called this "methodical signing" and his instruction became known worldwide as "the French method." Noble Epee's motive: "to reach heaven by trying at least to lead others there." He put on grand public performances, reeling off questions that deaf pupils answered in up to seven languages. In an age when deaf children were a scandal, to be hidden or abandoned, Epee demonstrated they were as intelligent as hearing youngsters. His system prevailed for nearly a century, until educators known as oralists, including Alexander Graham Bell (74), insisted the deaf needed to speak, not sign. That conflict continues to this day. **8,255**

623 DENG XIAOPING (1904–1997) *architect of China's economic miracle*

One of Mao Ze-dong's comrades in founding Communist China in 1949, Deng launched a market liberalization three decades later, saying, "It doesn't matter if a cat is black or white, as long as it catches mice." The economy took off, prompting speculation it might outstrip America's in the twenty-first century. Deng opened China to the world, even donning a cowboy hat at a Texas rodeo. But ever the tyrant, he ordered the Tiananmen Square massacre of prodemocracy demonstrators in 1989, the greatest blot on his legacy. He said he wanted to avoid the chaos that had killed millions under Mao. (The pragmatic Deng had bounced back from two Maoist purges to become China's "paramount leader" in 1978.) The four-foot-eleven chain smoker was unencumbered by human affection, declining to attend his father's funeral and earning his daughter's description as "a man of introverted character and few words." **8,221**

624 HORATIO NELSON (1758–1805) *seagoing hero*

Britannia ruled the waves for three centuries, and here's the dirty secret: The British navy's most celebrated fighting commander had no stiff upper lip. Nelson cried easily. He was a self-promoter. He abandoned his wife for a married woman, Emma Hamilton. He often forgot that his men were fighting for England's welfare, not his glory. They didn't care; he had the "Nelson touch" for victory. "Among all the warriors of his generation, Napoleon alone was a greater master of the souls of men," biographer David Hannay wrote. Nelson went to sea at twelve and won fame against the French at the battles of Copenhagen, Aboukir Bay, and Cape St. Vincent, where he lost his right arm. "England expects that every man will do his duty," he signaled before the Battle of Trafalgar. Minutes later, a French sharpshooter killed him. Nelson was so revered, Parliament ennobled his heirs and paid them £5,000 a year until 1951, when the government said, enough already. **8,210**

625 BERTHE MORISOT (1841–1895) *impressionist master of the ordinary*

Our favorite Morisot painting, *Mother and Sister of the Artist*, celebrates a simple domestic scene. A friend of Cézanne (72), Pissarro, Monet (196), and Renoir (384), Morisot exhibited in all the Parisian impressionist shows, except in 1879, when she was pregnant. Women in her day were often disqualified from intellectual endeavors by their very femaleness. As writer Virginia Woolf (441) wryly noted, historically in literature, "Anonymous" was a woman. The art world was no different, but Morisot and American impressionist Mary Cassatt changed all that. That the impressionists were themselves outcasts in France made it more logical that women flourished in

this untraditional environment. Morisot fell in with the boys after she and her sister struck up a friendship with Édouard Manet (301). "It's a pity they are not men," Manet remarked about them. He mentored Berthe; she posed for him and married his younger brother. **8,177**

626 PAUL JULIUS REUTER (1816-1899) *wire service whiz*

No idealistic journalist, Reuter was a canny German businessman who recognized how the telegraph could deliver news fast. Born Israel Beer Josaphat, he changed his name and converted from Judaism to Christianity. Better for business, Reuter said. He launched a prototype of the news service in Paris in 1849, using carrier pigeons to bridge gaps in the unfinished telegraph system. Two years later in London he founded the service that retains his name today. Reuters first relayed market developments via telegrams. Later it supplied newspapers with first-hand accounts of world events. Reuters's first scoop: transmission of Napoleon III's speech to French legislators as he delivered it in 1859. He alluded to impending war between France and Austria. These days the agency is refocused on financial news. "Reuters has turned itself into nothing less than the world's leading supplier of computerized information," said *Forbes* magazine in 1989. Julius would be pleased. **8,160**

627 POPE JOHN PAUL II (b. 1920) *amazing Grace*

The first non-Italian pontiff since the Dutch Adrian VI died in 1523, John Paul wasted no time in flying around the globe to greet adoring throngs from his popemobile. His impact was immense; his historic visit to his native Poland in 1979, one year after his ascent to the throne of Saint Peter, inspired the creation of the Solidarity trade-union movement that became the catalyst

of Communism's collapse. He energized the Catholic Church with his youthfulness and intellect, though some liberals lambasted his doctrinal orthodoxy. He sought reconciliation with the Jews. A poet and playwright since adolescence, John Paul greeted the people of Rome after his election with the words, "Be not afraid." He met with the Turkish gunman who tried to assassinate him and called him "my brother." He railed against abortion, euthanasia, economic injustice, and capitalist decadence. Four words summarize his life: He preached the Gospel. **8,158**

628 STEPHEN LANGTON (c.1155-1228) *the cleric who stared down a king*

He was the archbishop behind the Magna Carta, the document that started the West on the road to popular sovereignty. After preaching a sermon at London's St. Paul's Church on August 25, 1213, Langton told a group of rebellious barons that he had found a copy of a promise by King Henry I, 113 years earlier, to respect the rights of his vassals. It was just the legal precedent the barons needed to support their demands against Henry's great-grandson, the power-grabbing, money-grubbing King John (416). The barons used Henry's promises as a model for the Magna Carta, and Langton helped convince John to sign it in 1215. Langton was a biblical scholar at the University of Paris in 1207 when Pope Innocent III (78) picked him to be England's chief prelate, the archbishop of Canterbury. When John's successor, King Henry III, sought Langton's permission to tax the clergy, the archbishop said, yes, but don't make it a habit. **8,124**

629 ANNA FREUD (1895-1982) *the daughter who analyzed children*

How Freudian! The child of the father of psychoanalysis (15) dedicated her career to analyzing kids.

First a teacher, Anna studied psychiatry under her father's tutelage. She wasn't her father's favorite, but she sure got his attention by caring for him after he became ill with cancer of the mouth. She became his voice at professional conferences, his nurse and confidante. Father and daughter fled Vienna in 1938 to escape the Nazis and settled in England. After her father's death in 1939, Anna Freud became a leading figure in child psychiatry. She developed ways for analysts to interpret the play of children, founded a British clinic for child therapy, and coined the phrase "separation anxiety" to describe the fear children feel when they are removed from their parents. **8,093**

630 JOSÉ DE SAN MARTÍN (1778–1850) *South America's liberating lion*

Spanish army officer San Martín heard the call of his native Argentina and joined the revolution against Spain in South America. Under orders from the junta in Buenos Aires, he organized the crack Army of the Andes, telling conscripts, "I want only lions in my regiment." San Martín led them boldly across the mountains—a military feat ranking him with Hannibal and Napoleon (16)—to invade Chile in 1817, defeating royalists at Chacabuco. Eventually his forces crossed into Peru and occupied Lima. But after fifteen years of struggles, San Martín grew dispirited and began proposing monarchies, not republics, for the new countries. When revolutionary giant Simon Bolívar (48) arrived, San Martín retreated and allowed Bolívar to finish the fight for Peru. Before leaving for exile in Europe, San Martín told his rival: "Time alone will tell which of us has foreseen the future more clearly." Bolívar had. **8,092**

631 ERNEST MACH (1838–1916) *scientist of sound and fury*

The Austrian's experiments with the speed of pro-

jectiles were so innovative, engineers now measure the velocity of sound in Mach numbers. At thirty-two degrees Fahrenheit, Mach One is 1,180 feet per second. Mach the philosopher of science had an impact as large as Mach the physicist, in a perverse way. He rejected commonsense extrapolations and taught that science should describe only those phenomena that can be observed. Albert Einstein (17), Max Planck (136), and Werner Heisenberg ultimately disagreed, but their agonizing explorations of Mach's views when they were young made them better scientists. Lenin (41) thought Mach was so wrong, he wrote a book, *Materialism and Empirio-Criticism*, sounding off against "Machism." Mach's son Heinrich committed suicide, and Mach blamed himself for failing to prepare the lad for life's difficulties. That conclusion was based on common sense, a very un-Machian concept. **8,077**

632 CATHERINE DE MÉDICIS (1519–1589) *the Mommie Dearest of the Renaissance*

Behind every great man there is a woman, and behind some wishy-washy kings there was Catherine. Daughter of the Florentine Medici, she married France's King Henry II, then mothered three French kings and two queens of Spain. When her weak son, Charles, was king, Catherine masterminded the 1572 St. Bartholomew's Day Massacre of Protestant leaders who were attending the wedding of Catherine's daughter. The slaughter spread, and seventy thousand Protestants eventually were killed. The stout Catherine's hearty interest in food fueled creation of a national cuisine. When her penchant for spinach became known, dishes were served "à la Florentine," after her city of origin. Although Catherine's husband preferred the company of his mistress, the queen had the last word. When Henry died, she confiscated the

enchancing Loire Valley château, Chenonceaux, which the king had given to his lover. **8,050**

633 CHARLES-PIERRE BAUDELAIRE (1821-1867) *rebel with a verse*

Moody and introspective, Baudelaire wrote poems of inner despair that spoke directly to twentieth-century British and American poets. His masterpiece, *Flowers of Evil*, shows brilliant phrasing and expressive lyrics, but its eroticism shocked fellow French on publication in 1857.

A sample from the poem "Jewels":

*Her long legs, her hips, shining smooth as oil,
Her arms and her thighs, undulant as a swan,
Lured my serene, clairvoyant gaze to travel
To her belly and breasts, the grapes of my vine.*

Baudelaire was convicted of obscenity and ordered to suppress six poems. He complied, then wrote thirty-three more. "This book is almost good," he wrote his doting mother. "It will endure as testimony of my disgust and my hatred of all things." He wanted to write a vitriolic autobiography, too, but suffered a stroke that left him paralyzed. **8,048**

634 LUDWIG WITTGENSTEIN (1889-1951) *searcher for the meaning of meaning*

The Austrian-born Wittgenstein studied in Cambridge under philosopher Bertrand Russell, who called him "perhaps the most perfect example I have ever known of genius." His 1921 masterpiece *Tractatus Logico-Philosophicus*, based on jottings he made while fighting in World War I, explores the relationship between language, thought, and the world. The final sentence reads: "Whereof one cannot speak thereof one must be silent." Wittgenstein, a homosexual and born-again, if idiosyncratic, Christian, was an intense man. After giving away a huge inheritance in 1919, he supported himself teaching school in rural Austria. He contemplated committing suicide,

as three of his four brothers had done. He once stormed out of a room after the German philosopher Karl Popper joked that he felt threatened by the way Wittgenstein was waving a poker around to emphasize a point. "I am a worm," he wrote, "but through God I become a man." **8,042**

635 JOHN DUNS SCOTUS (c.1277-1308) *the smartest dunce in Christendom*

Contemporaries called Duns Scotus the "subtle doctor" because he ruminated on divinity, will, being, and intellect until every shade of meaning had been catalogued ad nauseam. To future generations it was gibberish. That's why the word *dunce* was derived from his name. At the risk of getting an F for flippancy, we say his contribution to mankind was this: a body of teaching that was brilliant, yes, but so convoluted that more focused successors, such as William of Ockham (601), were challenged to make sense of what Duns Scotus had written, and did. Duns Scotus entered the Franciscan order in his native Scotland at age fifteen and spent his adult life teaching in Oxford, Cologne, and Paris. King Philip IV of France understood Duns Scotus well enough to exile the scholar for siding with Pope Boniface VIII (837) in a political quarrel. **7,982**

636 DIETRICH BONHOEFFER (1906-1945) *hero in a sea of hate*

A German Protestant theologian who opposed Hitler, Bonhoeffer studied in New York in the early 1930s. On an American lecture tour in 1939, he was beseeched by friends to remain in order to avert persecution at home. "He paced the room upstairs here at Union [seminary], smoking his cigarettes, fighting his conscience," a classmate recalled. Finally he decided: "I will have no right to participate in the reconstruction of Christian life in Germany after the war if I do not share

the trial of this time with my people." He was arrested in 1943 for anti-Nazi activities, imprisoned, and hanged weeks before Germany's surrender. Since then his influence as a foe of injustice and champion of ecumenism has soared. Contemptuous of the "cheap grace" many seek, Bonhoeffer insisted that action speaks louder than words, saying, "Only those who can cry out for the Jews can sing Gregorian chants." **7.979**

637 KONSTANTIN E. TSIOLKOVSKY

(1857–1935) *cosmic dreamer*

Before the close of the nineteenth century and the advent of the airplane, this Russian researcher's gaze saw rockets hurtling through the universe. In *Investigation of Cosmic Space by Reactive Machines*, published in 1903, he solved theoretical problems of space flight, paving the way for Soviet efforts half a century later. At ten Tsiolkovsky contracted scarlet fever and lost his hearing. Shunned by neighborhood children, he withdrew into himself to read, concentrate, and dream. "The thought of communicating with cosmic space never left me," he said. Self-taught in higher mathematics, physics, and astronomy, this high school teacher dedicated his spare time to the research of flight in his homemade wind tunnel. Underpinning his life's work: recognition that the entire universe is mankind's domain. "Earth is the cradle of the mind," Tsiolkovsky said, "but one cannot live in the cradle forever." **7.977**

638 WILLIAM GLADSTONE (1809–1898)

*pillar of British politics
in the British century*

Gladstone's evolution from Tory theocrat to Liberal champion of free trade and a free Ireland is one of the more compelling political conversions of history. But then, Gladstone was no ordinary man. The son of a Scottish corn merchant who got rich in the West Indies sugar-and-slave trade,

he wandered London's streets at night trying to persuade prostitutes to change their ways. He read twenty thousand books and chopped trees for exercise, prompting Lord Randolph Churchill to quip, "The forest laments in order that Mr. Gladstone may perspire." Four times prime minister, his political reforms doubled the British electorate. While he never achieved home rule for Ireland, he sought to ease that land's suffering. He was called the Grand Old Man of Victorian England, even though Queen Victoria (91), goaded by his archrival Benjamin Disraeli (640), despised him as "that half-mad firebrand." **7.962**

639 BENJAMIN DISRAELI (1804–1881)

the other pillar

Disraeli was the quirky Conservative to the straight-arrow Liberal Gladstone (638), his arch-rival. Early in his career, he condemned his own party to the political wilderness by attacking the free-market policies of the Tory prime minister Robert Peel (932). After finally "climbing to the top of the greasy pole" of power, as he put it, he championed social reforms and an aggressive foreign policy as prime minister in 1868 and 1874–80. Baptised a Christian at age thirteen, Disraeli reveled in his Jewish roots. To enemies who called him a "Jewish scamp," he retorted, "Half Christendom worships a Jewess, the other half a Jew. Which should be the superior race, the worshiped or the worshipers?" Besides, the person who counted, Queen Victoria, adored him. No wonder; everyone loves flattery, he said, "and when it comes to royalty, you should lay it on with a trowel." **7.935**

640 PHILIPPE PINEL (1745–1826)

*advocate of humane treatment
for the insane*

He abhorred his age's cruel treatment of the dangerously mad and believed that mental illness

could be cured. Pinel taught that asylums—like the one he established at Salpêtrière hospital in Paris—should be run by medical doctors like himself, not jailers. He built a halfway house so the newly cured could adjust to society. “I am convinced that the only reason these insane people are so intractable is that they are deprived of air and liberty,” he wrote. Pinel’s theories eventually became accepted wisdom, and they also saved his life during the French Revolution. When a mob that had sacked a church turned on Pinel for denouncing them, he was protected by a recently unchained mental patient. **7,912**

641 JAMES GORDON BENNETT (1795–1872) *molder of the modern newspaper*

As editor of the penny paper *The New York Herald*, Bennett discovered that scooping the competition would sell papers. Getting it first was more important than getting it right. Bennett commissioned a fleet of boats to meet incoming steamers so he’d be first to print news from Europe. More than any other nineteenth-century editor, Bennett defined news as we know it. In his paper stories were timely and sensational. He focused on crime and local events, and he used the telegraph to print stories from distant battlefields. Bennett closed the coffin on the era of partisan newspapers in America when he announced in his inaugural edition in May 1835 that his *Herald* would serve no party. It didn’t, but it sure served Bennett. He used the columns of his newspaper to attack his enemies, poke fun at liberal causes, and promote himself as a man-about-town. **7,901**

642 INIGO JONES (1573–1652) *architectural purist*

Jones refined Renaissance architecture, giving it restraint and proportion. For two centuries his

innovative image of beauty distinguished English architecture. Jones was a clothmaker’s son but rose to royal service through sheer talent. He wowed the court with costume and scenery designs before joining the earl of Arundel’s entourage to Rome in 1613. There he visited ancient ruins and studied the architect Palladio’s (133) works. Back home he was designated Surveyor of the Works, the chief architect of the land. Among his contributions: the first major urban development in London, Covent Garden. He created a large open space bordered by arcaded houses, a garden, and a church. Today only St. Paul’s Church (not to be confused with the cathedral) survives. Jones’s finest achievement was the Banqueting House, the royal building in Whitehall, with its ceiling covered by Rubens (281) paintings. Ironically, this was the site Puritans chose for the execution of Jones’s patron, Charles I, in 1649. **7,884**

643 PIERRE-MARIE-ALEXIS MILLARDET (1838–1902) *fungus fighter*

The French botanist noticed that a foul-looking mixture of copper sulfate, lime, and water that local farmers slathered on their grapevines to discourage grape-grabbing thieves also destroyed a common mildew. He took the ingredients into his laboratory, tinkered with them for several years, and emerged with an even more effective formula, creating the first scientifically engineered fungicide. Since his technological breakthrough, researchers have developed untold recipes for preserving plants against parasitic blights, helping to ensure an adequate food supply for the world’s billions. Striking another blow for human happiness, Millardet saved France’s vineyards from an insect pest by grafting resistant American vines onto the domestic plants. Monsieur, we who are about to dine salute you. **7,863**

644 WILLIAM MORRIS (1834–1896) *designing Victorian*

It's controversial, but we rank Morris first among poet-novelist-socialist-environmentalists who were also in the chintz wallpaper business. His work in all forms conveyed his belief that industrialized England should remember the sense of community, and respect for craftsmanship, of the past; his lasting contribution to design and the environmental movement was his advocacy of a future based on an idealized conception of the past. "Forget the snorting steam and piston stroke," he wrote. "Think rather of the pack-horse on the down, and dream of London, small, and white and clean." He celebrated the past in novels and fantasy epics, such as *The Earthly Paradise*, and there was a medieval feel to the furniture, wallcoverings, stained glass, and books that he produced in his workshops. He was a founder of England's Socialist League but quit when its program became as mechanistic as the society it wanted to change. **7,841**

645 PETER GOLDMARK (1906–1977) *groovy inventor*

He made the first color television and the first miniature TV, but he wins gold marks for his invention that revolutionized the music industry. Annoyed that a full symphony couldn't be recorded on a single 78 rpm record, Goldmark improved the technology. Along with a team of researchers at CBS Laboratories, he reduced record grooves from 0.01 inch to 0.003 inch. His "microgrooves" pressed into vinyl records improved the sound and allowed six times as much music to be played at a new speed of 33½ rpm. The first LP, short for "long playing," featured Goldmark on cello, a secretary on piano, and an engineer on violin. LP records lasted only about forty years before they, too, were made

obsolete, but not before they gave birth to a multibillion-dollar recording industry. **7,820**

646 ROBERT A. WATSON-WATT (1892–1973) *a huge blip in the history of inventions*

Next time your plane lands safely, thank your lucky stars for amazing radar, short for "radio detection and ranging." It's the air traffic controller's bible, the pilot's electronic equivalent of a compass. Without it, air travel would be as hairy as a bumper-car ride, and we'd all be shaving wingtips with props from Cleveland and saying our prayers. Mercy! Commercial air travel wasn't uppermost in Watson-Watt's mind as he labored in Britain's National Physical Laboratory in 1935, honing a system of aircraft location. Late that year the Scottish physicist was able to pinpoint a plane's location as far as seventy miles away by beaming radio waves at it, receiving the reflections, and calculating its distance by time passed. Experimental work with radar goes back to 1904 in Germany. But Watson-Watt's achievement led to the design of the world's first practical radar system, which warned the British of incoming German air raids in 1940. **7,803**

647 ALEKSANDR SOLZHENITSYN (b. 1918) *voice of rage against totalitarianism*

In 1945 Solzhenitsyn was sent to the Stalinist labor camps for eight years on trumped-up charges. The Russian dissident got his revenge, first in his 1962 challenge to the Kremlin, *One Day in the Life of Ivan Denisovich*, the tale of one inmate's endurance of oppression in the camps, and later in his descriptions of the terrors of prison life in *The First Circle*, *Cancer Ward*, and *The Gulag Archipelago*. Not only did his works undermine the Soviet system, they established Solzhenitsyn as a literary genius; some

consider another novel, *August 1914*, his supreme achievement. Asked the secret of his art, he replied, "When you've been pitched headfirst into hell, you just write about it." Expelled from Russia in 1974, Solzhenitsyn spent twenty years in Vermont before returning to his homeland after it abandoned Communist rule. He found it "tortured, stunned, altered beyond recognition." **7.778**

648 **PIERRE-JOSEPH PROUDHON**
(1809-1865) *anarchist, before
anarchism got a bad name*

Nineteenth-century anarchism evokes images of bushy-bearded men making bombs in basements. The French Proudhon created the philosophy of anarchism, but armed insurrection was not his bag; government would disappear peacefully when labor fell into the hands of the community of all people, he taught. Proudhon was an impoverished, gentle family man who abhorred the revolutionism of his critic, Karl Marx (14), but shared Marx's goals. "I dream of a society where I would be guillotined as a conservative," Proudhon told a friend. It was all very nebulous, but his call for workers' organizations as a prelude to anarchism stimulated the worldwide union movement. Proudhon later regretted his service as an elected deputy in the Second Republic because he believed that democrats were no better than Emperor Napoleon III, who jailed him briefly in 1851. **7.769**

649 **WILLIAM RANDOLPH HEARST**
(1863-1951) *colorful creator
of yellow journalism*

After Hearst sent artist Frederic Remington to Cuba on the eve of the Spanish-American War, Remington telegraphed that there would be no war. Hearst cabled back: "Please remain.

You furnish the pictures, and I'll furnish the war." Some say the story's apocryphal, but even history books record with relish how Hearst's outrageously sensational coverage fueled previously lukewarm public sentiment for war. His *New York Journal* invented "yellow journalism" with exaggerated—and sometimes just plain false—stories of murder and mayhem under bold "screaming" headlines. Locked in a down-and-dirty circulation battle with Joseph Pulitzer's *New York World*, Hearst raided Pulitzer's staff and hired away the cartoonist who drew the popular "Yellow Kid." When both papers published versions of the kid, people started calling them "the yellows." The name today describes the seediest side of journalism. **7.741**

650 **MARIA MONTESSORI** (1870-1952)
children's educational champion

Montessori's epiphany was a child's smile. Harassed by male classmates in medical school, she decided to quit. En route home, she spied a street urchin delightedly playing with a piece of paper. That image sent Montessori back to the books. She became Italy's first woman doctor, then tackled a greater mission: reforming the educational system, infusing it with respect for children and a belief in their creative potential. She succeeded with Rome's mentally retarded, then with children in a squalid neighborhood. Ever since, her approach linking biological and mental growth has influenced education worldwide. The free-willed Montessori rejected restrictive classrooms with regimented rows of desks and teachers drumming information into little heads. "Before such dense and willful disregard of the life which is growing within these children," she said, "we should hide our heads in shame and cover our guilty faces with our hands!" **7.740**

651 TS'AO CHAN (1715-1764) author of China's greatest novel

Dream of the Red Chamber, a tale of the tragic love between Chia Pao-yu and his cousin Lin Tai-yu, chronicles the decline of a great family whose greed symbolizes the decadence of the ruling Ching dynasty. A sample chapter title reads: "A Henpecked Young Profligate Takes a Concubine in Secret." A feast of realistic detail, *Dream of the Red Chamber* has been compared to a Henry James (557) novel for its delineation of the manners and morals of high society and to Proust's (207) *Remembrance of Things Past* for its subtlety and metaphor. Elements are autobiographical; Ts'ao's grandfather was a wealthy official who hobnobbed with the emperor, but his father fell on hard times and Ts'ao ended up in a Beijing slum, boozing and scratching away at his novel. Grief-stricken at his son's death, he fell fatally ill, leaving behind his unpublished manuscript.

7,723

652 NICOLAS LEBLANC (1742-1806) soda's pop

Not soda as in Coke and Pepsi, but soda as in the common name for sodium carbonate. Without it, you couldn't make thousands of everyday products as diverse as aluminum, soap, and paper. Frenchman Leblanc put the fizz in the Industrial Revolution in 1789 by discovering how to produce soda quickly, cheaply, and in huge quantities. He combined sulfuric acid, seawater salt, limestone, and charcoal, and there was no better formula until the mid-nineteenth century. Leblanc was the duke of Orleans's private physician, but he lost his job when the duke lost his head in the French Revolution. So Leblanc concentrated on sodium carbonate. His factory was nationalized in 1794, and by the time Leblanc got it back in 1800, he had too little

capital to exploit his own process. Depressed and sick, he shot himself to death.

7,701

653 DOROTHY DAY (1897-1980) Catholicism's grassroots rebel

Day was no fly-by-night Catholic, but she routinely rattled the church's stodgy establishment when she advocated civil disobedience, ignored the tax man, and went to jail for antigovernment activities. Day abandoned a loose life in New York when she converted to Catholicism. In 1933 she and Peter Maurin founded the Catholic Worker movement based on a philosophy of anarchism, voluntary poverty, pacifism, and activism. Maurin took a back seat while Day promoted their ideas as editor of the *Catholic Worker* newspaper, which she began distributing on May Day 1933 to New York's unemployed. She paid for the printing with her already-overdue rent money, funded the second edition by selling her typewriter, and then relied on donations. "When we need money, we pray for it," she explained. People touched by her ideas gave up material wealth, joined Day at her barebones New York headquarters, and pitched in to spread her message.

7,684

654 EDWARD GIBBON (1737-1794) grandest historian of history's grandest civilization

Presented with the second volume of Edward Gibbon's *History of the Decline and Fall of the Roman Empire*, the duke of Gloucester exclaimed, "Another damned thick, square book! Always scribble, scribble, scribble, eh Mr. Gibbon?" Some scribbling. One of modern times' most-read history books was instantly celebrated and controversial, too, for suggesting that it was Christianity that doomed Rome. The book's popularity showed that the right blend of facts, analysis, and vivid writing could make history

appealing to a mass audience. Gibbon was squat and unlovely, but the beautiful Swiss intellectual Suzanne Curchod would have married him if Gibbon's father hadn't forbidden a match with a foreigner. The spurned Suzanne married France's finance minister, Jacques Necker. For years Gibbon neglected a testicular tumor that finally grew observably huge, to the amusement of his political enemies. Soon after he had the growth punctured, he died of a fever. **7,665**

655 JAMES WOLFE (1727-1759) *soldier who made Canada English*

Imagine if France had repelled the British invasion of Quebec during the French and Indian War. Would today's Canada be dominated by French culture? Would cash-poor Napoleon (16) have sold Canada to the United States, as he did the Louisiana Territory? Wolfe made these questions moot. On September 12, 1759, after reciting Thomas Gray's "Elegy in a Country Churchyard," with its line "The paths of glory lead but to the grave," the thirty-two-year-old major general sent his disciplined redcoats up the weakly guarded cliffs next to Quebec. They routed the surprised French the next day. Wolfe and the opposing commander, the Marquis de Montcalm de Saint-Véran, were both killed. French rule in Canada was over a year later. Wolfe's sickliness and his youth made him an odd choice for so important a command, but he had distinguished himself in earlier battles. His last words were "Now God be praised, I die happy." **7,632**

656 ELIZABETH SETON (1774-1821) *America's first native-born saint*

The pious and selfless Elizabeth became "Mother Seton," founder of the first American religious society, Sisters of Charity, and the parochial school system in the United States. Long before

that Seton had her own five children to guide. In 1803 her husband died in Italy, where the family had traveled to seek a cure for William Seton's tuberculosis. But it proved too late. Grief-stricken, Elizabeth clung to a mental mantra: "My God, You are my God—how alone I am in the world except for you and my little ones; but You are my Father and doubly theirs." Help came. William's friends, the Filicchis, took the family in, and Seton, an Anglican, was impressed by their devout Catholic faith. Two years later in New York, she stunned family and friends by converting. Her adoptive faith honored her with canonization in 1975. **7,609**

657 PIERRE BONNARD (1867-1947) *high colorist of modern art*

Vibrant color was Bonnard's calling card, and he passed it out to generations of artists. Pulsating oranges. Blood-rich reds. Lemony yellows. This, from an unassuming man with a drab childhood. A dutiful student, Bonnard graduated with a law degree as his father wished. Then he chose to paint. "What attracted me then was less art itself than the artistic life," Bonnard said. "I wanted to escape from a monotonous existence." As a member of the Nabis school of painting, Bonnard recorded daily life during France's Belle Époque, from the bustle of a crowded café to a table being set in a sunlit kitchen. No heavy social messages here. Our favorite Bonnards: the mournful *Circus Horse*, and the tenderly intimate *Nude at Her Toilette*. Toulouse-Lautrec (817) saw Bonnard's 1889 lithograph poster for *France Champagne* and decided he could do that, too. The rest is art history. **7,588**

658 STEPHEN I (977-1038) *apostle of Hungary*

Stephen, who brought Hungary into Christendom, defeated a pagan insurrection, but not

before the rebels stuffed an Italian missionary into a barrel lined with spikes and rolled him down a hill. On Christmas Day in the year 1000, Stephen was anointed Hungary's first king with a papal crown that to this day is revered as a sacred relic that, in some mystical way, *is* Hungary. Stephen was a monarch's monarch, who counseled his son in his famous *Admonitions* to "rule over all without anger, pride or hatred, but with love, tenderness and humanity." The son, Emeric, or Emericus in Latin, died young and became Saint Emericus, a name that was bestowed in Italianized form on the fifteenth-century Florentine Amerigo Vespucci. Thus, some argue, America gets its name from this eleventh-century Hungarian prince. **7,565**

659 HENRY VII (1457–1509) *unifier of England*

The founder of Britain's Tudor dynasty won the throne by defeating his predecessor, Richard III, at the Battle of Bosworth Field in 1485. That victory ended the War of the Roses, a half century of feudal skirmishing that had made life in England as risky as the Wild West. Henry VII cemented Britain's unity by marrying his predecessor's niece, and then he put his inherent frugality to good purpose and built a bulging treasury. Compared with Henry VIII (100), his glorious son, and Elizabeth I (31), his brilliant granddaughter, Henry VII seems like a mere dark schemer. But without him his successors would have lacked a stable foundation for their splendid feats. **7,559**

660 JOHN GREGG (1867–1948) *the secretary's best friend*

We'll keep this one short. Gregg was the unchallenged master of speed writing. With his system, developed in 1888, the writing hand could keep up with the spoken word. Gregg Shorthand,

which is indecipherable to the untrained eye, was so successful for office work that it spawned numerous secretarial courses and was eventually adapted for thirteen languages. Sure, the dictaphone and the personal computer ultimately transformed the secretarial job by the end of the twentieth century. But Gregg's shorthand, coupled with Sholes's (531) typewriter, first created a revolution in offices and provided women a career path that freed them from dreaded factory work. **7,533**

661 SAMUEL GOMPERS (1850–1924) *founder of the modern American labor movement*

Teenaged Gompers emigrated from London to the United States and worked as a cigar maker. Under his leadership his tradesmen split from the Knights of Labor in 1886 to form the future giant American Federation of Labor. Gompers was AFL president for thirty-seven years. "He believed in his work with a deep, almost religious fervor, yet he was too practical to become a fanatic," said George Meany, a successor as union president. Staunchly conservative, Gompers strove not for revolution but for economic gains in workers' lives. In an era hostile to labor, he pressed for higher wages, a shorter work week, and binding, written trade agreements. His principles of "voluntarism" urged unions to use economic means such as strikes and boycotts to pressure management. Lenin (41) dismissed this as a "rope of sand." But to Gompers and others, democratic trade unionism proved more powerful than "chains of steel." **7,528**

662 CRAZY HORSE (1842–1877) *strategist of Custer's last stand*

Ta-sunko-witko, Sioux chief of the Oglala tribe, was a bold leader in his nation's battle to stem

white settlement of the northern Great Plains. His nickname, Crazy Horse, stuck after a wild horse dashed through camp at his birth. After General George Custer's troops attacked his tribe's encampment in South Dakota, Crazy Horse led Sioux warriors down a valley, across the Little Bighorn River, and in a sweeping arc to attack the Seventh Cavalry on June 25, 1876. Overwhelmed, Custer and his men fought to the death. The slaughter was the beginning of the end of the Indian wars. American troops subsequently overran the plains, and after the harsh winter of 1877, Crazy Horse and other Indian leaders surrendered. While in custody at Fort Robinson, Nebraska, Crazy Horse was bayoneted in the back. His dying words: "Tell the people it is no use to depend on me anymore now." **7,507**

663 GOTTHOLD LESSING (1729-1781) *intellectual star of the Age of Enlightenment*

Lessing ushered in the indigenous German theater with his 1763 comedy-drama, *Minna von Barnhelm*, about a Prussian soldier and his Saxon fiancée. Until then, German plays had followed stuffy French conventions and portrayed French characters. Literature seduced Lessing when he was training for a career as a Lutheran minister, and in his twenties he captivated his countrymen with poems, fables, criticism, epigrams, and silly songs, like this:

*It rains and rains and will not stop,
So grieves the peasant for his crop.
But what care I for wet or fine,
So be it rains not in my wine.*

It's better in German. Of higher brow is Lessing's 1766 *Laokoon*, one of the first comparisons between the aesthetics of literature and visual art. That, and his deistic moral philosophy—he taught that the search for the truth is as satisfying

as finding it—made Lessing one of the giants of eighteenth-century learning. **7,488**

664 GRANDMA MOSES (1860-1961) *the grand old woman of painting*

Grandma Moses lived a lifetime before she started painting. She gave birth to ten children and raised five to adulthood. She was past age seventy and had worked a farm and buried her husband before finally finding time for art. In 1938 an art collector passing through Hoosick Falls, New York, saw her work displayed in the local pharmacy. He tracked Moses to her farm at nearby Eagle Bridge. With his patronage three Moses paintings were included in a New York Museum of Modern Art exhibition of "Contemporary Unknown American Painters." Cubism and abstraction were *au courant*, but Moses's primitive scenes of farm and rural life touched a nerve with people fearful that the Great Depression and, later, World War II could destroy that American way of life. Moses kept on painting. One of her last projects, finished at age one hundred, was a set of illustrations for "Twas the Night Before Christmas." **7,461**

665 LUTHER BURBANK (1849-1926) *the green thumb*

Burbank was a self-taught horticulturalist who plowed ahead without knowledge of Mendel's (104) work on heredity. As a farm boy, he pored over Darwin's (7) *Variation of Animals and Plants Under Domestication*, later pronouncing it "without question the most inspiring book I had ever read." Burbank took Darwin's theory of natural selection and applied it to producing better plants through hybridization. His big discovery: the Burbank, also known as the Idaho potato, a superb variety generated not from standard tubers but from select seeds. Selling the rights to that spud paid Burbank's way from Massachusetts to

California, where he bought a little spread and proceeded to make horticultural history. By taking native and foreign strains, then nurturing seedlings and grafting these onto growing plants, Burbank created more than eight hundred new varieties of fruits, flowers, ornamentals, vegetables, grains, grasses, and forage plants. **7,459**

666 FRANCISCO FRANCO (1892–1975) *America's totalitarian buddy*

Aside from driving Spain into economic ruin with his statist policies, Franco played a pivotal role in the great struggle between Western democracy and totalitarianism. El Caudillo, as he was known, won the 1936–39 Spanish Civil War with the help of Hitler (20) and Mussolini (460) and gave his fellow Fascist potentates aid and comfort in World War II. Yet after Hitler's defeat, Franco rehabilitated his image as the anti-Communist "Sentinel of the West" allied with America. Despite his reactionary politics, he turned Spain over to technocrats in the 1960s, setting the stage for economic revival. Likewise, he bequeathed power to a liberal king who fostered democracy after the generalissimo's tediously drawn-out death. A man of courage who took a bullet in Spain's Moroccan wars, Franco was also a dour functionary with a penchant for vengefulness. He executed thousands of opponents during the civil conflict and ordered the garroting of Basque terrorists with piano wire. **7,433**

667 DOM PEDRO II OF BRAZIL (1825–1891) *the magnanimous monarch*

His father, Pedro I, led Brazil's peaceful break from Portugal in 1822, but that was no feat: the country was ready for plucking like a ripe coffee bean. Pedro's six-foot-four son, Pedro II, had more influence and charisma. Brazil's boundaries were set during his fifty-nine-year reign, and he

presided over the nation's modernization. He earned the nickname Pedro the Magnanimous for being kindly, learned, and as liberal as an emperor can be. He loved peace, except when he insisted on an unpopular war with Paraguay. Though he took a gradualist approach to the abolition of slavery, that scourge ended in Brazil during his reign. Pedro had a working knowledge of eighteen languages, and he traveled in the United States and Europe, where he met Victor Hugo (163), Charles Darwin (7), and Richard Wagner (165). He was so magnanimous, he let his generals overthrow him without a fight in 1889. **7,419**

668 CHARLES ATLAS (1893–1972) *the original ninety-eight-pound weakling*

Angelo Siciliano began his journey to physical perfection after his scrawny self brought a girlfriend to the beach at Coney Island. As he explained it, "A big, husky lifeguard, maybe there were two of them, kicked sand in my face. I couldn't do anything and the girl felt funny. I told her that someday, if I meet this guy, I will lick him." She dumped Angelo anyway, but he created a "Dynamic Tension" isotonic program to strengthen his pecs; he changed his name to honor the Greek god of muscles, sold his "Atlas" bodybuilding techniques, and made a fortune. The Atlas method fueled today's muscle-pumping phenomenon. For generations advertisements in popular comic books convinced nerdy teenage boys that the only thing standing in the way of a date with the homecoming queen was their wimpy physique. **7,402**

669 HAILE SELASSIE (1892–1975) *last emperor of Ethiopia*

Viewed early in his reign as a benevolent dictator who introduced reforms and defied an Italian

invasion, Haile Selassie became a greedy oppressor in his later years. Still, he centralized authority in Ethiopia and brought it into the twentieth century. His appeal to the League of Nations in 1936 for military help against the Italians struck a chord in the West, but Ethiopians were dismayed by his flight to Britain. The emperor, who traced his ancestry to the biblical queen of Sheba, returned home in 1940 and sank slowly into decadence. By one account he fed ribs of beef to leopards in the royal zoo while his subjects starved. Twenty-three Mercedes Benzes stood ready to whisk him to and from his nine palaces. He was ousted by a Marxist junta in 1974 and "strangled in his bed most cruelly" the following year, according to a 1994 court proceeding. **7.399**

670 ALBERT SCHWEITZER (1875-1965) *medical missionary*

Accomplished organist and respected theologian, thirty-year-old Schweitzer shocked friends by announcing he would "render direct service" to mankind by becoming a mission doctor. He earned his medical degree, his wife studied nursing, and the two set off in 1913 for French equatorial Africa. With locals' help they built a hospital in Lambaréné, Gabon. Natives came by canoe from two hundred miles away, suffering from malaria, leprosy, and sleeping sickness. While ministering to these patients, Schweitzer also evolved his ethical philosophy of "reverence for life" applied to all living things. He published these thoughts in *Philosophy of Civilization* in 1923. "If you study life deeply, looking perceptively into the vast and animated chaos that is creation, the profundity of it all will stun you," the German scholar once said. "You will recognize yourself in everything." His dedication to humanity earned Schweitzer the Nobel Peace Prize in 1952 and made his name a synonym for selflessness. **7.397**

671 HECTOR BERLIOZ (1803-1869) *orchestrator of the new orchestra*

His 1830 *Symphonie Fantastique* liberated the symphony from conventions. It not only told a story, it came with a program that let the audience follow along. The score included instruments new to symphonies: English horns and bells, for example. This helped create the modern, anything-goes attitude toward instrumentation. Like the subjects of his work—Faust, Romeo and Juliet, Dido and Aeneas—Berlioz was a lovestruck, tragic figure. His early works were denounced by critics such as Friedrich Zelter, who called *Eight Scenes from Faust* "an excrescence, the remains of miscarriage from a hideous incest." Twice Berlioz tried to kill himself. His smothering courtship of Irish actress Harriet Smithson bordered on stalking. She finally agreed to marry him, but then died of a stroke. Their only child, Louis, died of yellow fever. Yet much of his music was rousing and joyous and has charmed generations of listeners. **7.363**

672 JOHN JAMES AUDUBON (1785-1851) *the bird artist*

The cardinal focus of Audubon societies around the world is preservation of the wilderness. Audubon, however, was hardly a conservationist. He often killed his subjects, then wired them into poses. Not surprisingly, critics grouse that his birds were painted in unnatural positions and inappropriate settings. They also poke fun at the almost human expressions some of them display. Nonetheless, Audubon wins points for his masterpiece, *The Birds of America*, which included 1,065 life-size paintings and introduced North America's feathered friends to an audience of bird lovers in Europe. For the project Audubon painstakingly tracked birds throughout the continent, ultimately identifying one

new genus and close to two dozen species. Before he died, Audubon squawked about the vanishing frontier, endangered bison, and the dubious hobby of collecting bird eggs. To honor his memory, the first preservation society was named after him.

7,349

673 AL-MAHDI (1844–1885) *African nationalist idol*

A religious ascetic, Muhammad Ahmad ibn as-Sayyid 'Abd Allah declared himself the Mahdi, or savior of Islam, in 1881 and set out to purge the Sudan of its Egyptian rulers. Starting with a ragtag army equipped with sticks and spears—the Fuzzie-Wuzzies, poet Rudyard Kipling called them—he quickly united the Sudan's quarreling tribes and disparate social groups, from slave traders to devout Muslims, and destroyed the forces sent against him. In 1885 he captured Khartoum, killing the city's British commander, Charles Gordon—a terrible blow to Victorian England's pride. The victory sealed al-Mahdi's creation of a vast Islamic state. Five months later the self-proclaimed heir of the prophet Muhammad died of typhus. Today anti-Western Islamic fundamentalists find fertile recruiting ground among his ten million Sudanese disciples.

7,331

674 GEORGE GAMOW (1904–1968) *begetter of the big bang theory*

Gamow (pronounced *gam-uff*), a Russian-born American nuclear scientist, held that a thermonuclear explosion billions of years ago blew the elements apart from a single point and accounted for the continuing expansion of the universe. This explanation ultimately triumphed over the so-called steady-state hypothesis of an eternal, and rather dull, cosmos advanced by British physicist Fred Hoyle. In short, we say:

*In the beginning, if you please,
Was the Big Squeeze
Of all matter. Hence,
Things got quite dense.*

*Uncomfortably hot, too.
Well, wouldn't you,
If in some lab test,
You were thus compressed?*

*After this implosion,
Came a huge explosion
That, for better or for worse,
Produced the universe.*

*This (pardon the slang)
Was the Big Bang.
Things just went "puff."
Or so says Gamow.*

7,319

675 NATHANIEL HAWTHORNE (1804–1864) *Puritan man of letters*

With his psychological insight Hawthorne explored the guilt and anxiety of the human soul. His first novel, *The Scarlet Letter*, gained him immediate fame in 1850 and remains an American classic. This is the story of Puritan Hester Prynne, who must wear a scarlet letter "A" as punishment for adultery but steadfastly refuses to name her lover. Hawthorne grew up in a guilt-ridden, sin-obsessed Puritan household in Salem, Massachusetts. Except for his father's death, he had an uneventful childhood. "Few men of equal genius and of equal eminence can have led, on the whole, a simpler life," wrote author Henry James (557). Hawthorne knew this. "I have seen so little of the world that I have nothing but thin air to concoct my stories of," he said. But from that rarefied air he produced other esteemed works, including

The House of the Seven Gables and *The Marble Faun*.

7,298

676 **ANTONÍN DVOŘÁK** (1841–1904)
composer for a new world

He was an innkeeper's son, but every middle-class Czech learned music in those days, and Dvořák learned better than others. His symphonies, choral music, concerti, and chamber music are among the best of the late romantic period—far better, in our opinion, than the middlebrow bombast of his Russian contemporary, Pyotr Ilich Tchaikovsky. Behind most of Dvořák's great melodies lurked folk tunes from Bohemia, and even his most famous composition, the *New World Symphony*, a supposed compilation of American themes, is really a chip off the Bohemian block. Native tunes from regions as diverse as Appalachia, the Hebrides, and Eastern Europe use similar scales and sound hauntingly alike. If he had not been a composer, Dvořák might have been a conductor. Be it a mile-long freight or a New York City elevated train, Dvořák loved railroad travel and would spend hours watching trains rumble by. 7,258

677 **FRANCES WILLARD** (1839–1898)
the nineteenth-century equivalent of Mothers Against Drunk Drivers

The most prominent promoter of Prohibition was the Women's Christian Temperance Union, and Willard was the heart and soul of the organization. The WCTU, founded in 1874, blamed whiskey for most social problems. Men drank their paychecks, beat their wives, and abandoned their families when booze got the better of them. WCTU members draped in white ribbons published poetic pamphlets and proselytized as they pleaded with America to just say no. Schoolchildren sang rhymes to warn parents of whiskey's evil.

"Tremble, King Alcohol, We Shall Grow Up!" kindergartners chanted. Grow up they did. National Prohibition became a reality in 1919, and its fourteen-year failure proved emphatically that America was not a nation of teetotalers. While legendary saloon-smasher Carry Nation was indeed a member of the WCTU, the organization disavowed any knowledge of her actions, saying its methods were "not carnal but spiritual." 7,233

678 **JIM THORPE** (1888–1953)
the All-American athlete

A Native American with Sac, Fox, Potawatomie, and Kickapoo blood, Thorpe's Indian name Wa-tho-huck meant "Bright Path." That's exactly what he blazed on tracks, football fields, and baseball diamonds. "He had speed as well as strength," said "Pop" Warner, Thorpe's earliest football coach. "He knew how to use his strength and speed as well as any football player or track athlete I have ever known." Thorpe earned greatest fame for winning the decathlon and pentathlon in the Stockholm Olympics in 1912. But he was stripped of his medals after officials learned he had earned twenty-five dollars a week playing semiprofessional baseball. When age forced Thorpe from the sports arena, he couldn't adjust and drank heavily. In 1950 the Associated Press named him best all-around athlete of the first half of the twentieth century, and we say he belongs at the top of the second half, too. In 1983 apologetic Olympic officials returned Thorpe's medals to his children. 7,199

679 **SATO EISAKU** (1901–1975)
navigator of Japan's economic reemergence after World War II

As prime minister from 1964 to 1972, Sato presided over an export boom that created Asia's top economy. His diplomacy was marked by the

time-tested Japanese genius for obfuscation; responding to President Nixon's (904) demand for export restraint, he promised, "I will do my best." Nixon thought he had a deal and was furious when the trade gap widened. Sato's political accomplishments included signing the nuclear nonproliferation treaty, renewing the U.S.-Japanese security treaty, and regaining Okinawa for Japan. Sato apparently had a weakness for handouts; he was accused of accepting bribes from Japanese shipbuilders in 1954 and, four years later, "tried to put the bite on us for financial help in fighting Communism," the American ambassador in Tokyo reported. **7,163**

680 **JOSEPH GLIDDEN** (1813-1906) *the barb in barbed wire*

The six-shooter didn't tame the West—barbed wire did. Cattlemen ruled the plains until farmers put up fences that kept bovine herds off the cropfields. Until about 1950 most barbed-wire fences used Glidden's 1873 process of attaching steel points to plain wire. Glidden got the idea from a crude version he saw at a county fair in DeKalb County, Illinois. He tinkered until he improved the process well enough to receive three patents. In 1875 he sold his share in his factory for \$60,000, plus royalties, and that made him rich. Glidden's contemporaries used barbed wire to keep animals out. Future generations used it to keep people in. Hitler (20) used it in concentration camps, and until the cold war ended, a curtain of barbed wire snaked across Europe from the Aegean to the Baltic seas, a barrier to freedom for Communism's captives. **7,182**

681 **MUHAMMAD ALI** (b. 1942) *the greatest!*

He avoided tackle football because it was too rough; he almost missed the 1960 Olympics

because he was afraid to fly; and he claimed conscientious objector status during the Vietnam War because, he said, warfare was against his religion. Yet Muhammad Ali was the greatest boxer of his time. He weaved, jabbed, danced, and shuffled his feet to a 56-5 professional record. The only three-time heavyweight champion in history, he pulled no punches outside the ring. Ali was harshly criticized by white America after he converted to the Nation of Islam, changed his name from Cassius Clay, and refused to enter the army. Around the globe Ali's message of black pride touched as many people as the civil rights movement. In addition to his mantra "I am the greatest!" Ali, debilitated in later years from taking too many punches, claimed his was the most famous face in the world. It was. **7,171**

682 **DOROTHY CROWFOOT HODGKIN** *(b. 1910) decipherer of organic puzzles*

Soft-spoken but resolute, Hodgkin mastered X-ray crystallography to forge significant breakthroughs that led to the proliferation of wonder drugs. In crystallography X-rays are beamed through crystals, and the resulting waves strike a photographic plate, creating thousands of spots. After analyzing these photos and making untold mathematical calculations over four years, Hodgkin deciphered the structure of penicillin in 1946. Drug makers used her model to create varieties of penicillin to attack specific bacterial infections. It took another eight years for Hodgkin to identify the atomic structure of vitamin B-12, which fights pernicious anemia. This accomplishment won the British scientist the Nobel Prize in chemistry in 1964. She didn't stop there. Five years and seventy thousand X-ray spots later, she built a model of complex three-dimensional insulin. She accomplished all this despite crippling rheumatoid arthritis that left her hands like twisted stumps. **7,152**

683 **BLACKBEARD** (d. 1718) *history's baddest pirate*

Unlike Captain Kidd (968), a lame excuse for a brigand, Blackbeard was a bloodthirsty ogre who loved debauchery and once forced a captive to eat his own ears. Author Daniel Defoe (197) said he engaged in "frolics of wickedness so extravagant as if he aimed at making his men believe he was a devil incarnate," including locking himself and three companions in a ship's hold and setting a smoldering fire to see who could withstand the fumes the longest. Born Edward Teach in England (or perhaps Jamaica), Blackbeard launched a reign of terror in the Carolinas and in the Caribbean from 1716 to 1718, seizing booty from gold coins to bales of cotton before being killed and decapitated by the British. A ballad celebrated his end:

*When the bloody fight was over,
We're informed in a letter writ,
Teach's head was made a cover
To the jackstaff of the ship.*

7,141

684 **ALEXANDER PARKES** (1813-1890) *England's Edison*

Most inventors in our pantheon had a single triumph: Bell (74) hooked up the telephone, Nobel (217) exploded dynamite. Parkes is obscure because he flitted from project to project, but he patented sixty-six processes that energized the manufacturing revolution of the nineteenth century. He made breakthroughs in electroplating, even silverizing a spider's web for Prince Albert, to show the brilliance of his process. He figured out how to rubberize textiles, a discovery that was purchased by the Mackintosh Company to make waterproof raincoats. He developed an efficient method for extracting silver from lead. His greatest invention was Parkesine, the first crude plastic. He pressed acid-soaked cotton into solid cylin-

ders, which could be made malleable with solvents, oil, and resins and molded into any shape. Parkesine was too flammable for mass application, but it was a first step toward celluloid, Bakelite, and other durable synthetics. **7,125**

685 **JACQUES COUSTEAU** (1910-1997) *Magellan under the oceans*

You can argue all you want about whether Columbus (2) really discovered America, but the oceans belonged to Cousteau. His *Undersea World of Jacques Cousteau* made public television fans out of millions of viewers who were mesmerized, as was the oceanographer, by the vibrant, colorful world beneath the waves. Cousteau began his exploration of the depths as a French naval officer during World War II. With engineer Émile Gagnan, he invented the self-contained underwater breathing apparatus (scuba), which allowed divers to venture deeper and stay under longer. Other seaworthy inventions included diving boats and research facilities that permitted explorations for days in the depths. He founded the Cousteau Society to popularize preservation of the oceans, and his research boat, *Calypso*, achieved such stature that it was celebrated in a hit song by the late pop singer John Denver. Considered by some the greatest explorer of the twentieth century, Cousteau won two Academy Awards for his documentaries. **7,116**

686 **HENRY FIELDING** (1707-1754) *nurturer of the English novel*

Samuel Richardson and Daniel Defoe (197) wrote earlier novels, but Fielding took the genre further. He showed the extraordinary potential of the new literary form with *Joseph Andrews* and his masterpiece, *The History of Tom Jones*. Fielding turned to fiction after stints as a playwright, newspaper editor, and magistrate. Although *Tom Jones* is built

around a romance, it teems with observations on eighteenth-century life and amusing characterizations of people from all ranks of society. The book throbs with energy like its lusty hero, Tom, who sins repeatedly but always wins forgiveness. "I have endeavored to laugh mankind out of their favorite follies and vices," Fielding said. Critic Walter Bagehot pictured Fielding as "a reckless enjoyer. He saw the world—wealth and glory, the best dinner and the worst dinner, the gilded salon and the low sponging-house—and he saw that they were good."

7,089

687 GERHARD GROOTE (1340–1384) *copycat priest*

One of our favorite cartoons features the arrival of a rotund monk with the obligatory fringe of hair around a marvelously bald head, quill pen in hand, with the caption: "Your new copier is here." That's how we envision Groote, who founded a center for book copying, which grew into a religious order, the Brethren of the Common Life. He's the fourteenth-century version of a Xerox machine. He helped the impoverished intelligentsia financially by setting them to work copying books. Members of his religious community pooled their incomes earned through teaching and book copying. While they lived a monasticlike existence, Brethren members never took vows. His order, which flourished in Groote's native Netherlands and in Germany, was the first to give grades for schoolwork, provide textbooks, and create the structure for elementary and secondary schools in Europe.

7,061

688 CHESTER CARLSON (1906–1968) *copycat inventor*

At a boring job retyping plans in a patent office, Carlson fantasized about a machine that would reproduce pages instantly. So he made one. The

secret was photo conductivity, the power of light to make chemical changes in substances—in this case paper. The Smithsonian Institution has Carlson's first copy, a sheet of waxed paper with the blurry words "10-22-38 Astoria," the name of his apartment building, and the date. IBM, RCA, and Remington weren't interested in his crude process, but the fledgling Haloid Company bought Carlson's ideas in 1947 and perfected his work. Haloid marketing gurus called the process xerography and changed the company's name to the Xerox Corporation. Carlson's biggest failure was an attempt to give away the entire fortune he had accumulated from royalties. He gave \$150 million to charity but died before he could disperse the final \$50 million. History does not record the name of the office worker who first asked, "What's wrong with the @&%\$ copier?"

7,038

689 ELIZABETH KENNY (1880–1952) *physiotherapy pioneer*

Victims of the poliomyelitis scourge writhed in agony when their twisted arms and atrophied legs were immobilized in casts. Kenny, a nurse in the Australian bush country, figured out a better way to rehabilitate damaged limbs. The first time she saw a victim of the dreaded disease, her little patient was crying in agony. The child found no relief when Kenny straightened the legs with sandbags. In desperation Kenny wrapped the girl's legs in hot wet rags. The whimpering stopped. Kenny developed massages and exercises to revive a patient's strength. She had first witnessed exercise's power when she helped her sickly younger brother strengthen his frail body. Today she's called "sister," the British title of respect for a nurse, but doctors then called her a quack and a charlatan. Kenny was vindicated when she was invited to share her unorthodox methods at the Mayo Clinic in Rochester, Minnesota, in 1940.

7,012

690 KWAME NKRUMAH (1909-1972) *Ghana's shining light*

Nkrumah was president of Ghana, the first of the European colonies in Africa to gain independence. He wanted to enter the priesthood until he was drawn into the African nationalist movement and became a Marxist. He outlined his plan for Africa's anticolonial struggle in his 1947 book, *Towards Colonial Freedom*. As Ghana's president, Nkrumah opened more jobs to Ghanaians and built roads, schools, and hospitals. He told cheering crowds in 1957 that Ghana "would be a shining light throughout the whole continent of Africa, giving inspiration beyond its frontiers." He spoke too soon. The faltering economy—a problem to plague Ghana for decades—churned labor unrest. Nkrumah tightened control, having himself declared president for life. In 1966, however, he was ousted in an army coup. Nkrumah's lasting achievement: assembling eight African leaders in Accra in 1958, a precursor to the Organization of African States. **6,980**

691 THOMAS CARLYLE (1795-1881) *English historian and prose stylist*

Historical evidence suggests that after twenty-five years of marriage, Carlyle's wife Jane was a virgin, proving that the pen is indeed mightier than the sword. Carlyle's stirring book, *The French Revolution*, is one of the millennium's best-selling histories. He had to write it twice; he lent his only manuscript to philosopher friend John Stuart Mill (81), and a servant used it for tinder. In *Past and Present* Carlyle extolled the simplicity of the Middle Ages and railed against laissez-faire capitalism's human toll. *On Heroes, Hero-Worship, and the Heroic in History* championed the idea that to understand history, all we need to do is study great men—a notion swept aside in the determinist wave of the late nineteenth century. In all his books—inaccurate, dated, and overly sentimental

though they may seem today—Carlyle's romantic prose energized the study of history and elevated historical writing to the status of literature. **6,963**

692 JOHN L. SULLIVAN (1858-1918) *fist-swinging hero of the masses*

When Sullivan won the heavyweight boxing championship in 1882, loser Paddy Ryan said, "I thought that a telegraph pole had been shoved against me endways." Sullivan, the "Boston Strong Boy," was champ for ten years, and when he bellowed his famous challenge, "I can lick any son-of-a-bitch alive," he spoke for the immigrants and city dwellers thirsting for power in an America that had been dominated by the rural gentility. Sullivan's prowess and strength, his gusto, his genius for self-promotion, and his earnings—\$1.2 million in the pretax years from 1878 to 1915—made him the model for every celebrity athlete from Babe Ruth (360) to Michael Jordan (903). He remained popular even when he beat his wife, tore up saloons, and kicked newsboys. Sullivan's toughest opponent was booze, but he licked it in 1905 and became a well-paid temperance preacher. **6,921**

693 HANNAH GLASSE (1708-1770) *the simple chef*

Mrs. Glasse couldn't cotton to the nonsense in French kitchens. Why cook like a "French Booby" when you can learn from "a good English cook?" she asked. *The Art of Cookery, Made Plain and Easy, which far exceeds any Thing of the kind ever yet Published . . . By a Lady* was the first commercially successful cookbook in English and the only one geared to housewives and servants. With recipes for hare, calves' feet, and other eighteenth-century staples, Glasse rejected French techniques. She scoffed at one cook who used six pounds of butter to fry a dozen eggs; only a half-pound was needed, she argued. Thirty-four edi-

tions of her cookbook circulated for a century after its 1747 publication. Today one thousand new cookbooks are published annually, but as Glasse herself pointed out, she did it first. **6,914**

694 **BLANCHE OF CASTILE** (1188–1252) *the power behind the throne*

Blanche's grandmother, Eleanor of Aquitaine (420), journeyed to Spain to fetch the eleven-year-old for marriage to the French prince Louis. Blanche soon adopted French ways and dedicated herself to forging France's unity. You'd want this lady on your side. A woman of strength and devout faith, she twice ruled France: first when her husband, King Louis VIII, died of dysentery after fighting southern heretics; then when their son, the saintly Louis IX (613), left to fight in the Crusades despite Mama's wishes. The strain of Louis's capture by the Muslims, and Blanche's trip to Egypt to free him, weakened her frail heart. After she collapsed en route to a retreat house, aides brought the dying queen mother back to the palace of the Louvre, dressed her in a nun's habit, and laid her to rest on a bed of hay. **6,907**

695 **ZWANGENDABA** (c.1780–1848) *African apostle of assimilation*

In 1818, when Europe was settling into a post-Napoleonic peace and the United States was enjoying the "era of good feeling" under President Monroe (708), southern Africa was being ravaged by the Mfecane, or Crushing, a social collapse engendered by Zulu expansionism and European colonialism. Whole tribes crisscrossed the region in search of food and safety from marauding bands. In the midst of this chaos, King Zwangendaba led his Jere people on a thousand-mile, twenty-five-year trek, molding his warriors into a formidable fighting force. But instead of killing off the stragglers of other mass migrations, he absorbed them

into his tribe, creating one of the most powerful kingdoms in East Africa, the Nguni nation. He ended up on the southern shores of Lake Tanganyika, where he founded the city of Mapupo. After his death the Nguni split into five divisions and continued their expansion. **6,882**

696 **NEIL ARMSTRONG** (b. 1930) *first moon walker*

July 20, 1969, 10:56 P.M.(EDT). Spellbound, we watched on television with more than a half-billion others as spacesuit-clad Armstrong emerged from his spacecraft. Carefully the veteran combat pilot descended the ladder from the lunar module perched 240,000 miles away on the moon's Sea of Tranquility. One short jump off the bottom rung, and he planted his boot in lunar soil and proclaimed, "That's one small step for [a] man, one giant leap for mankind." It also sealed U.S. supremacy in the eleven-year-old space race with the Soviet Union. For two hours Armstrong and fellow astronaut Buzz Aldrin hopped across the moonscape collecting rock samples. "Isn't it fun?" Armstrong asked. Reluctantly they reboarded their spacecraft, leaving behind an American flag, instruments to yield scientific data, and a plaque commemorating their landing. "I hope some wayward stranger in the third millennium may read it and say, 'This is where it all began,'" Aldrin said. **6,863**

697 **BAYEZID** (c.1360–1403) *founder of the first centralized Ottoman state*

In three short years Bayezid steamrolled across much of the Balkans and conquered portions of Asia Minor in his drive to extend Ottoman rule. He was the first of the Osman dynasty to use the title sultan, but the many who feared him also called him "the Thunderbolt." When his forces occupied Bulgaria and put Constantinople under

siege, Hungarians and Venetians led a major Crusade in protest, but Bayezid crushed them in 1396 at Nicopolis on the Danube River. Terrified, Europe braced for Bayezid's invasion. Instead he returned to unfinished business—his conquest of Anatolia, now part of Turkey. That made him Rival Number 1 to the equally brutal Tamerlane (51), the Tatar invader of India. Their armies clashed near Ankara in 1402. The mightier Tatar forces destroyed Bayezid's army, and captured Smyrna and the sultan himself. In that one decisive battle Tamerlane stole Bayezid's thunder. **6,835**

698 THOMAS HOPKINS GALLAUDET

(1787-1851) *schoolmaster to the deaf*

Gallaudet directed the first American school for the deaf in Hartford, Connecticut, in 1817. It led in training educators of the deaf for decades. After graduation from Yale, Gallaudet had planned to become a minister, but his health failed. Recovering at home, he tutored deaf neighbor Alice Cogswell, and this service stirred his missionary zeal to educate the deaf and save their souls. With financial backing from Alice's father, Gallaudet studied in France with Abbé Sicard, successor to legendary teacher of the deaf Abbé de L'Épée (622). Gallaudet also imported Sicard's star teacher, Laurent Clerc. Unlike some profiteers, Gallaudet's motives were lofty in operating a school for the disabled. "His religious life was his whole life. His life was a living sermon," said Henry Barnard, U.S. commissioner of education. The school founder's son became president of Gallaudet University, the world's first college for the deaf, fittingly named after his father. **6,798**

699 UNKEI (1148-1223)

Japanese blockbuster

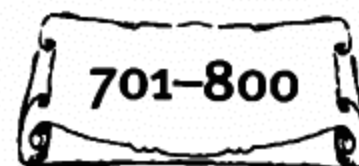
Wood sculptures grew lifelike in Unkei's hands. He lived during the transition from regency to

feudalism and, in contrast to the delicate prettiness of art in the early twelfth century, Unkei's new school stressed strength and realism. He was influenced by the emergence of the Zen sect in Buddhism with its emphasis on simplicity. But he also injected naturalism into sculpture through his new system of joining parts with double-pronged iron staples. No more would artists have to straddle entire tree trunks to chisel some august figure's body and head. Now they could work sensitively with each piece, even to the point of holding the head in their hands to carve fine features. Our favorite Unkei work: the standing figure of the ancient Indian teacher Mujaku, so quietly powerful and noble. Unkei carved this statue in 1208 for Kofukuji Temple. **6,771**

700 THEODORE ROOSEVELT (1858-1919)

celebrity president

The egomaniacal, body-building, buffalo-hunting, former assistant secretary of the navy led the charge up San Juan Hill in the Spanish-American War and came home a hero. As governor of New York, he invented his motto, "Speak softly and carry a big stick," to describe how he cowed the state legislature. When the progressive-minded Roosevelt was elected vice president in 1900, conservative Republican Party chairman Mark Hanna complained, "Don't you realize that there's only one life between this madman and the White House?" An assassin ended that life—President William McKinley's—and Roosevelt was in the White House from 1901 to 1909. He built the Panama Canal, flexed America's muscle abroad, busted monopolies, and won the Nobel Peace Prize for mediating the Russo-Japanese War. After the exciting Roosevelt, presidents were no longer content to be the head of a government. For better or worse, they were now America's celebrities-in-chief. **6,759**



Previous generations went gaga over the telephone, over the automobile, over plastic, over atomic power, over television, over space travel. All were huge leaps in technology that transformed our lives. But none ushered in—dare we use the metaphor—a new millennium.

Computers are different. They are more important than any of the above. Bigger even than the automobile. More far-reaching in their ultimate impact on civilization, perhaps, than the printing press itself. If we could declare one soul to be the creator of the computer, the Great Pilot of the Age of the Internet, we might have to bump Gutenberg from our number 1 spot to make room.

But there is no king who can lay claim to the computer crown. So we are forced to divide the prize among a passel of princelings, five of whom make our next honor roll. So pause with us to salute John Bardeen, the transistor meister; Robert Noyce, the chip champion; Stephen Wozniak, the PC pioneer; Seymour Cray, the computer superman; and David Packard, the computer supersalesman.

Every advance in computing has been engineered by groups of researchers, which made it tough for us to pick individuals responsible for,

say, the transistor, the chip, or the personal computer. We're sure to be criticized for choosing Wozniak over Steven Jobs and William Gates as the progenitor of the personal computer, Noyce over Jack Kilby as the chip champ, and Bardeen over William Shockley as the transistor inventor. (In Shockley's case, we plead guilty to being negatively influenced by his well-publicized musings that blacks are genetically inferior.)

As we gaze at the other names on our next group of one hundred, we can't help but notice the presence of an unusually dense concentration of free-market economists: Friedrich von Hayek, the libertarian foe of collectivism; Peter Drucker, the management guru; and Milton Friedman, the monetarist mandarin. A coincidence? We think not. Capitalism and computers go together. One is all about the free flow of goods and services; the other is all about the free flow of information. These days, you can't have one without the other.

701 WILLIAM MORTON (1819–1868) *a knock-out in anesthesia*

One thirteenth-century surgeon anesthetized his patients with a sponge cooked in opium, hemlock berries, unripened mulberry juice, spurge flax, climbing ivy, and other plants. Later, resourceful physicians intoxicated their patients first with whiskey and told them to "bite the bullet," literally. Morton, a dentist, studied the anesthetic properties of nitrous oxide (laughing gas) with Connecticut dentist Horace Wells. Wells's early work was discredited, however, when he attempted to demonstrate for colleagues at Massachusetts General Hospital the use of nitrous oxide during a tooth extraction. The patient howled in pain. Two years later, in 1846, Morton instead used ether before pulling a tooth. Then he anesthetized a printer who needed a tumor removed from his neck. Doctors around the world hailed this discovery, which helped bring about the era of modern surgical techniques. **6,733**

702 JOSEPH II (1741–1790) *priggish potentate of the people*

In his vast Austrian Habsburg domains, Joseph abolished serfdom, established religious equality, founded universities and hospitals, balanced the budget, granted press freedom, and supported the arts. Adored by the common people, he complained that his overpaid ministers "often ruin everything, thinking they know everything without reading or experience." Both his wives died of smallpox, but his great love was his mother, the empress Maria Theresa (355), coruler with him from 1765 until her death in 1780, to whom he wrote, "Your glance is more to me than all the kingdoms of the world." He chastised his sister, Marie-Antoinette (781), queen of France, for her partying and gambling. "Why do you mix with this mob of libertines, prostitutes, strangers?" he

asked in a letter. In a remarkable display of self-loathing, the enlightened despot ordered his epitaph to read, "Here lies Joseph, who was unsuccessful in all his undertakings." **6,719**

703 PETER DRUCKER (b. 1909) *Mr. Management*

In two dozen books, from *The End of Economic Man* in 1939 to *Managing in a Time of Great Change* in 1995, Drucker espoused a practical approach to sharpening managers' skills. Some consider him the inventor of the science of modern management. Certainly he found a mass audience; his 1974 tome, *Management*, rocketed past *The Joy of Sex* on the bestseller list. Yet he was no fusty academic. He studied corporations close up and showed how success is a matter of seizing opportunities, like the fledgling IBM's realization that business, not government, would be the biggest market for computers. Many of the Austrian-born guru's admonitions are management gospel today: Never charge the maximum you can get; treat employees as a resource, not a cost. Asked what the best-managed organization is, Drucker replied, "The Girl Scouts. Tough, hard-working women can do anything." **6,711**

704 AMELIA EARHART (1897–1937) *advertisement for adventure*

Decades before "Air Jordan" transformed the Chicago Bulls basketball star into the most famous name in America, Amelia Earhart signed her name to make a buck. Earhart wasn't interested in money, but endorsements and publicity stunt flights provided the capital to maintain her oh-so-expensive toy, her airplane. Public appearances were interspersed between such adventures as being the first woman pilot to solo across the Atlantic. Clothing and a full line of luggage carried her name; her endorsements ranged from

cars to cameras to sunglasses. Publisher G. P. Putnam created her image, orchestrated her career, and then married her. Earhart was in the midst of an around-the-world jaunt when her plane disappeared in the South Pacific. The mystery surrounding her fate made her as huge a celebrity in death as in life. **6,682**

705 **RENÉ FAVALORO** (b. 1923) *coronary bypass surgeon*

Television anchorman Walter Cronkite had it done; so did interviewer Larry King; tennis great Arthur Ashe did, too, and maybe former Vice President Nelson Rockefeller should have. At the heart of bypass surgery is Favaloro, an Argentine surgeon at the Cleveland Clinic. In 1967 Favaloro spurred to the forefront of open-heart surgery when he used a vein from his fifty-one-year-old patient's leg to bypass a diseased artery surrounding the heart. The man lived. When Favaloro presented his techniques at a cardiology conference, doctors jammed into the room. Physicians in the hallway literally knocked down the door to hear him. Since then, bypass techniques have been perfected. Using artificial valves, surgeons routinely perform quadruple bypass. This surgery is so commonplace, it has given new life to millions of patients. In 1996, for example, more than 309,000 bypass operations were performed in the United States alone. **6,678**

706 **ABBAS I** (1557-1629) *Persian powerhouse*

Persia was a snakepit of unruly chieftains until Abbas the Great won control with a professional army and English advisers. Then he defeated Turkish and Uzbek invaders to create a centralized nation. His capital at Isfahan, with its walled parade ground ten times larger than Rome's St.

Peter's Square, is still one of the world's architectural triumphs. Abbas was superstitious, canny, and cruel. In 1591 an astrologer predicted the king would die, so Abbas abdicated temporarily and had his replacement killed to satisfy the prophecy. Abbas celebrated a victory over the Turks in 1603 by having twenty thousand enemy skulls heaped before him, and he kept his ambitious sons at bay by having one murdered and two blinded. Ironically, by making his temporal power so strong, Abbas created a target for advocates of priestly power, and his country—modern-day Iran—has been bedeviled by conflicts between mullahs and monarchs ever since. **6,652**

707 **MATTHEW PERRY** (1794-1858) *American crowbar who opened Japan to the West*

All Perry's other adventures, from suppressing the African slave trade to hunting pirates in the West Indies, pale beside his expedition to pry Japan out of two centuries of isolation. In 1853 "Old Bruin" anchored four ships in lower Tokyo Bay and demanded a trade treaty. Local authorities dithered, and Japanese suits of armor quadrupled in price. Historian Samuel Eliot Morison said it would be as if Americans today discovered that "weird-looking spacecraft were on their way to earth." But Perry said his naval force merely sought to "bring a singular and isolated people into the family of civilized nations." After making a greater show of force the following year, he got his wish. Japan entered the modern era, and the world has never been the same. **6,621**

708 **JAMES MONROE** (1758-1831) *doctrinaire president*

Monroe's message to Congress on December 2, 1823, later known as the Monroe Doctrine, was the basis of U.S. foreign policy for more than a

century. It also marked the young republic's step on the road to world superpower. Monroe, the fifth president of the United States, told European powers the American continents were closed to colonization. Attempts to counter this policy, he added, would be considered threats to U.S. security. Behind the declaration were fears that a coalition of European powers would send a major force to quash rebellious Spanish-American colonies. Monroe had struck a political nerve. "The depth and permanence of American feeling on the subject has been repeatedly demonstrated," said historian John A. Garraty. One recent example was the 1962 Cuban missile crisis, when President Kennedy ordered the Russians to remove missile bases from Cuba. **6,615**

709 SOPHIE GERMAIN (1776–1831) *proponent of good vibrations*

The French Germain articulated the formula behind the physics of vibrating elastic surfaces, paving the way for the construction of massive structures like the Eiffel Tower and skyscrapers. She came to mathematics with no formal training. Her parents were so against her career choice that they kept her bedroom without light or a fire so that she would not study at night. Her ink froze in the well, and she had to wrap herself in blankets to study in near darkness, but she was not deterred. Germain surreptitiously gained the support of Europe's leading mathematicians by sharing her research with them under an assumed name. She made such an impression on Carl Friedrich Gauss (109) that he recommended her for an honorary doctorate from a German university. **6,587**

710 JOHN BARDEEN (1908–1991) *the incredible shrinking scientist*

The age of consumer electronics began on December 23, 1947, when a team at Bell Labs

built the first transistor. The tiny metal gizmo replaced cumbersome tubes for amplification and switching of electric signals. A world without transistors would lack home computers, space shuttles, VCRs, microwaves, and other modern, electronics-filled products. William Shockley and Walter Brattain had been working on transistors, but the breakthrough was made possible by Bardeen, a theoretical genius who joined them in 1945. The three shared the Nobel Prize for physics in 1956, and Bardeen later became the first person to win two Nobel Prizes in one field. He shared the 1972 physics award for superconductivity theories that led to small powerful electromagnets used for such wonders as magnetic resonance imaging. **6,578**

711 GEORGES CLEMENCEAU (1841–1929) *French tiger in World War I*

Clemenceau, a dominant figure of the Third Republic, also defended the Jewish officer Dreyfus in the Dreyfus affair that tore apart France. Luckily for Dreyfus, Clemenceau urged Émile Zola (607) to change the title of his famous denunciation of corrupt officials to the majestic "J'accuse" from the bureaucratic "Open Letter to the President of the Republic." In 1917, with the Germans winning the war, France's president appointed Clemenceau premier. Winston Churchill (38), visiting the French parliament the day Clemenceau took power, said the seventy-six-year-old Frenchman "looked like a wild animal pacing to and fro behind bars. . . . France had resolved to let her tiger loose upon all foes." Queried about his policy, Clemenceau replied, "Home policy? I wage war. Foreign policy? I wage war." He won the war, but his demands for crushing reparations from his defeated foe fueled German resentments that led to World War II. **6,555**

712 JOHN FORD (1895-1973)

*director who did what
a director's got to do*

If you've been looking for actor John Wayne's niche in the millennium, stop here. This is the entry for Wayne—and it's all about Ford. As one of Hollywood's greatest directors, Ford not only discovered stuntman Marion Morrison, he changed his name to John Wayne and made him a star. But Wayne's got just a bit part in this big picture: Ford perfected camera work, told poignant stories, and directed some of the most important and enduring films ever. He won Academy Awards for *The Informer*, *The Grapes of Wrath*, *How Green Was My Valley*, and *The Quiet Man*. Although not honored with an Oscar, Ford's *Stagecoach* is universally considered the perfect film of the Western genre. The way he directed the camera to create panoramic, breathtaking scenes of the Wild West was such a trademark that today film buffs call the technique *Fordian*. 6,543

713 STEPHEN WOZNIAK (b. 1950)

personal computer wizard

Maybe there was something in the water; after all, Wozniak grew up in Silicon Valley. As a kid, his teachers thought he was deaf because it was so hard to get his attention. He won first place in the junior high science fair when he built a computer. At age twenty-four he designed the first Apple computer in his bedroom. It never occurred to him that he could make millions with his design. That was the idea of his high school buddy, Stephen Jobs, who had the business acumen to make Apple one of the most important computer companies. Before Apples, only "techies" had PCs and they had to assemble the unwieldy, complicated models themselves. When the Apple II was first

sold in 1977, however, it introduced such computer terms as *floppy disk*, *icons*, *mouse*, *point and click*, and *drag down*. Affordable, attractive, and "user friendly," it revolutionized American life. 6,528

714 LEO SZILARD (1898-1964)

A-bomb's anguished author

On a London street in 1933, an idea flashed in the Hungarian physicist's brain as he watched a traffic light turn green. If he could find an element that could emit two neutrons after being split by another neutron, he could start a nuclear chain reaction. And it would make a big bang. That was the theoretical genesis of the atomic bomb, and Szilard had a political role, too. In 1939 he convinced Albert Einstein (17) to write the historic letter that stirred President Franklin Roosevelt (37) to construct an A-bomb before the Nazis could build one. But the day after a bomb was dropped on Japan, Szilard was so mournful about the loss of life, he suggested that his lab staff at the University of Chicago wear black armbands. "Hiroshima shows that moral inhibitions can no longer be counted on," he said. He devoted the rest of his life to nuclear disarmament. 6,501

715 SEYMOUR CRAY (1925-1996)

creator of the supercomputer

Cray hated organizational charts and other trappings of corporate bureaucracy. Asked to draw up a five-year plan for an early company he worked for, he wrote, "Five-year goal: Build the biggest computer in the world. One-year goal: Achieve one-fifth of the above." What he loved was breakneck computing speed, and he tinkered with his machines until they became the fastest in the world. The payoff was enormous. His supercomputers, capable of simulating nuclear-

bomb explosions and deciphering enemy codes, assured American military superiority in the cold war. They also helped agriculture, by predicting weather patterns, and mining and oil drilling, by analyzing geological formations. Eventually advances in computer technology reduced the demand for supercomputers, and Cray Computer Corporation went bankrupt in 1995. That didn't stop Cray, though; he was planning another supercomputer project when he was killed in a car crash at age seventy-one. **6,498**

716 HERMAN MELVILLE (1819–1891) *one whale of a writer*

"Call me Ishmael," begins Melville's masterpiece, *Moby-Dick*, the leviathan of nineteenth-century American literature. It's the story of the insane whaling captain, Ahab, on a disastrous quest for Moby-Dick, the white whale that ripped off his leg. Plunging deeper, the novel is a strongly symbolic look at good and evil. Melville's magnificent prose is "like an organ with all the stops out," said critic Clifton Fadiman. The final scene, the ship sinking: "Now small fowls flew screaming over the yet yawning gulf; a sullen white surf beat against its steep sides, then all collapsed, and the great shroud of the sea rolled on as it rolled five thousand years ago." Those looking for an easy read didn't appreciate *Moby-Dick* on publication. "Though I wrote the Gospels in this century, I should die in the gutter," Melville told author Nathaniel Hawthorne (675). Almost. He worked twenty years as a customs inspector before dying in obscurity. **6,489**

717 KATHARINE DEXTER MCCORMICK (1875–1967) *pill pusher*

Biologist Gregory Pincus developed it; biologist Min-Chueh Chang tested it on rabbits; obstetri-

cian John Rock tried it on patients; but it was McCormick who planted the idea and provided cold cash—\$2 million—to create "the pill." The blue-blooded McCormick, a graduate of the Massachusetts Institute of Technology, was an heiress herself before she wedded the wealth of International Harvester. Decades in a childless marriage to a man who was insane moved her to endow a foundation to study mental illness and its link to hormones. After her husband's death, McCormick and friend Margaret Sanger (99) decided to buy themselves birth control that women could take like aspirin. Pincus said it was possible to develop but costly. So McCormick wrote a check for \$40,000, then kept the money flowing. When the pill was first marketed in 1960, it provided sexual freedom for women and ushered in that decade's swinging sexual revolution. **6,470**

718 GIUSEPPE FIORELLI (1823–1896) *careful intruder in the dust*

Many countries have a candidate for the title, "first great modern archaeologist." France has J.-F. Champollion, who deciphered hieroglyphics; Denmark has J.J.A. Worsaae, who proved the existence of the stone, bronze, and iron ages; England has Sir Flinders Petrie, who introduced scientific methods into Egyptology. For the greatest of them all, we chose an Italian, Fiorelli, who from 1860 to 1875 directed the excavation of Pompeii, the city covered in A.D. 79 by volcanic ash from the eruption of Mount Vesuvius. Fiorelli pioneered stratigraphy—careful digging layer by layer to avoid destruction of evidence—and founded a school to teach the method. He also developed the idea of pouring plaster into the depressions left by human remains to recreate the victims' body contours. At a time when archaeology was often just the recovery of treasures from graves, Fiorelli showed the world how to recover history. **6,465**

719 MARGARET THATCHER (b. 1925)

Britain's Iron Lady

Her Conservative Party colleagues quaked in her presence, and the Labor Goliath collapsed at her feet. Prime minister from 1979 to 1990, Thatcher dismantled Britain's welfare state and replaced it with free-market capitalism. Like Ronald Reagan, whom she called "the American dream in action," she attacked government spending at every turn (earning the nickname "Maggie the milksnatcher" early in her career for cutting school-milk programs). At first reviled for her austerity moves, Thatcher rebounded in the polls after going to war with Argentina over the Falkland Islands, and her economic policies ultimately bore fruit. You either loved her or hated her. George Bush lauded her as "the greengrocer's daughter who shaped a nation to her will," while a Dutch pundit called her "the witch in the European fairy tale." But Thatcher had the last laugh; her economic model triumphed over socialism worldwide. **6,442**

720 T. S. ELIOT (1888-1965)

poetic voice in the wasteland

The erudite Eliot plumbed Donne (280), Dante (30), and nineteenth-century symbolist poets for inspiration, creating an experimental style that rejuvenated English poetry. Eliot's early poems ache with the anguish and sterility of modern life, but later ones, such as "Ash Wednesday" and "Four Quartets," radiate hope. His spare yet elegant lines create indelible images, like this from "The Love Song of J. Alfred Prufrock":

*Let us go then, you and I,
When the evening is spread out against the sky
Like a patient etherised upon a table;
Or from "The Waste Land":
April is the cruelest month, breeding
Lilacs out of the dead land*

Prufrock, Eliot's first important publication, was so radically different that his publisher held it for a year, unsure it was poetry. By 1948 doubts had turned to acclaim, and the American-turned-Englishman was awarded the Nobel Prize for literature. **6,439**

721 COLETTE (1873-1954)

France's literary darling

Calling Colette an author is like saying Ben Franklin (54) was a printer. It's accurate, but it leaves an awful lot out. Colette was a bona fide Renaissance woman with careers as a mime, actress, playwright, journalist, essayist, novelist, short story writer, critic, and music hall dancer. Most of all, she liked to write about herself, but she loosely cloaked her books in fiction. She was so adored in France that when she died, she received a state funeral. Thousands crowded the streets of Paris to see her coffin pass. Her mystique has grown in death. The country is so devoted to her memory that the Colette Museum opened in May 1995; streets are named after her. Outside France the world embraces Colette for her novel *Gigi*, which found great success as a 1958 musical film starring Maurice Chevalier. Ah, yes, we remember it well. **6,394**

722 ALFONSO X (1221-1284)

learned king of Castile and León

The *Alfonsine Tables* were crafted under his patronage, and we're not talking about furniture. They were charts of the movement of stars and planets. Fifty astronomers did the work, and the printed copies that first appeared in 1483 helped scholars such as Copernicus (18) and Tycho Brahe (202) make breakthroughs that ended belief in the geocentric universe. Alfonso the Wise, as he was known, also wrote legal treatises and poetry, some of it raunchy. Bookishness

aside, Alfonso was a typical medieval European ruler: acquisitive, cunning, warlike; when he wasn't fighting Muslims, he was trying to put down his children's rebellions. He badgered four successive popes to make him Holy Roman emperor, until Gregory X offered a deal: The king would be granted ten percent of papal revenue in Spain if he would stop pressing his claim to the imperial throne. Being Alfonso the Wise, the king agreed. **6,388**

723 **MARTIN BUBER** (1878–1965)
philosopher who preached
the wonder of you

His central tenet was the need for dialogue to give meaning to life—the “I–Thou” relationship that defines love between two humans and between man and God (His most famous book is titled, not surprisingly, *I and Thou*). Though a Zionist who fled Nazi Germany to Palestine, Buber strove for Jewish dialogue with Christians and Arabs and said the central dilemma of his time was that “spirit and life have fallen apart from one another.” The point was to think of other beings, even plants and animals, as “thou,” not as “it.” Buber remembered stealing to his grandparents’ stable as a boy to stroke the neck of a dapple-gray horse. “It confided itself to me, placed itself elementally in the relation of Thou and Thou with me,” he wrote. “It was as though the element of vitality itself bordered on my skin.” **6,367**

724 **DAVID LIVINGSTONE** (1813–1873)
explorer of the Dark Continent,
we presume

Livingstone trained to become a medical missionary and dreamed of Christianizing Africa and finding the source of the Nile River. He accomplished neither goal. But this Scotsman’s discoveries during his amazing journeys across southern

Africa over thirty years fired competition among European powers for control of the continent. After reports of Livingstone’s death, the *New York Herald* sent journalist Henry Morton Stanley to track the legendary adventurer. “Dr. Livingstone, I presume,” was Stanley’s now-famous greeting when he caught up to him in 1871. “You have brought me new life,” Livingstone told him. Stanley returned to England with Livingstone’s writings on the horrors of the Arabs’ slave trade in East Africa. It gave abolitionists ammunition to pressure for reform. Livingstone shaped Western attitudes toward Africa, and in death as in life, he was revered by African followers. They preserved his body and carried it from the interior to the coast, an eight-month journey of fifteen hundred miles. **6,355**

725 **GERTRUDE STEIN** (1874–1946)
name-dropping social commentator
and patron of the arts

Stein would have ranked higher if only we could forgive her that awful “Rose is a rose is a rose.” What *was* she talking about? Alas, Stein played with words; the consequences be damned. Then there’s her most famous book, *The Autobiography of Alice B. Toklas*. Where does she get off writing someone else’s autobiography? Sure, Toklas was her other half in a union that lasted longer than most marriages, but come on. The 1933 book, with its eyebrow-raising observations of the world’s beautiful people, was an instant best-seller. Stein held her *très chic* salons in Paris in the decadent decades after the Great War. She entertained and encouraged the work of Picasso (149), Matisse (269), Hemingway (388), F. Scott Fitzgerald, and others. They painted her, wrote about her, and forgave her her insults—like the time she told Hemingway that he was “ninety percent Rotarian.” **6,339**

726 ALBERTUS MAGNUS (c.1200-1280) *sainted philosopher*

He was short in stature but a towering figure in the history of knowledge as Western Europe's first great champion of Aristotelian learning. He copied that old Greek so much, his critics called him Albert the Ape. Albertus was a German noble who joined the Dominican order and spent his life teaching. Thomas Aquinas (8) was his prize pupil. The pious Albert, sainted in 1622, walked barefoot on inspection tours of his church domains, and he owned nothing, not even the manuscripts he wrote. He succeeded so well in making Aristotle's science, philosophy, and mathematics known that the medievalist Henry Osborn Taylor wrote, "Perhaps the world has no greater purveyor of knowledge not his own." Albert would occasionally study nature. He wrote about plants and may have been the first man to produce arsenic in free form. **6,322**

727 DAVID PACKARD (1912-1996) *archetypical American entrepreneur*

With his partner William Hewlett, he launched the modern computer industry from a Palo Alto, California, garage with \$538 in cash in 1938. Their company, Hewlett-Packard, developed electronic testing and measuring devices and moved into computers in the 1970s, becoming a \$31 billion colossus by 1995. But Packard was known as much for his management philosophy, the so-called "HP way," as he was for his company's size and innovativeness. A plain-spoken man who worked in short-sleeve shirts, he believed that management should encourage workers to be creative problem-solvers rather than assembly-line cogs. He gave most of his money to charity, and his garage is now a California state landmark inscribed "the birthplace of Silicon Valley." **6,313**

728 JULIA MARGARET CAMERON (1815-1879) *portrait artist with a camera*

Cameron received a camera as a gift in 1863. She began making portraits at her home on the Isle of Wight, revamping the family's chicken coop into her studio. She photographed her children as well as distinguished figures, including Alfred Lord Tennyson, Henry Wadsworth Longfellow, Ellen Terry, Thomas Carlyle (691), and Charles Darwin (7). She experimented with poses and lighting, creating portraits that were haunting and intense. In those early days of photography, most critics focused on her technical shortcomings, including hazy outlines and negatives marred by tears, spots, and fingerprints. But some likened her shots to paintings of the old masters. Cameron's pictures were "admirable, expressive and vigorous, but dreadfully opposed to photographic conventionalities and proprieties," said critic Thomas Sutton. "They are the more valuable for being so." Legend has it Cameron died taking a photo. Her last word: "Beautiful!" **6,294**

729 EDWARD ROBINSON SQUIBB (1819-1900) *pharmaceutical phenomenon*

Squibb, an American navy doctor, dosed himself with rhubarb and bicarbonate of soda to cure a bad stomach. He got sicker. Then he discovered sand in the bicarbonate and worms in the rhubarb. He was appalled. After he recuperated and left the navy, E.R., as he was called, opened a pharmaceutical company dedicated to product purity and uniformity. He was seriously burned when a supply of ether caught fire and for the rest of his life sported a beard to hide the scars. He also had to tape his damaged eyelids shut at night. Undeterred, he rebuilt the factory and lobbied unceasingly for government regulation of the drug industry. He died six years before passage of the Pure Food and Drug

Act, but his company grew to become one of the giants in the pharmaceutical industry and merged in 1989 with Bristol-Myers. **6,268**

730 ROBERT NOYCE (b. 1927)

chip's champ

Noyce's creation of the first silicon chip in 1958 puts him in our hall of fame, by a hair. That's the thickness of a single modern processor ten thousand times more powerful than early computers that filled a room. The first chip, built just months before Noyce's by Jack Kilby of Texas Instruments, was made of germanium. Noyce's silicon version became more popular, and as a businessman he was the central figure in the rise of Silicon Valley as the cradle of electronics invention in America. Veterans of Noyce's Fairchild Semiconductors started more than fifty other companies. At his company, Intel, he instituted a collegial, anything-goes-if-you're-successful managerial style mimicked by the Apples, Microsofts, and Netscapes that emerged at the close of the millennium. As Tom Wolfe wrote of Noyce and his entrepreneurial clones, "If you created the right type of corporate community, the right type of autonomous congregation, genius would flower." **6,239**

731 MILTON FRIEDMAN (b. 1912)

inflation fighter

Friedman, whose mother was a sweatshop seamstress, is most famous for his doctrine of monetarism, which states that the money supply is the most important factor influencing economic activity and that central banks should regulate its growth to keep inflation down and the economy humming. First, Israel bought into his theory; then Ronald Reagan and his Federal Reserve chairman, Paul Volcker, did; then Margaret Thatcher (719) did; then the whole world did. And inflation went down. A libertarian disciple of

Friedrich von Hayek (738), Friedman surpassed his teacher. He was ahead of his time in opposing government subsidies and regulations and in promoting an all-volunteer army, a negative income tax for the poor, and school vouchers. One admirer called him Adam Smith's (21) "most distinguished spiritual son," while a detractor reviled him as the "bastard progeny" of John Maynard Keynes (201). What he really wanted, he said, was to "keep government in its place." **6,203**

732 ANTONIO VIVALDI (1678-1741)

concerto creator

Known as "the Red Priest" for his red hair and ecclesiastical background, Vivaldi also was one of the most influential composers of his time. He established the three-movement format for the concerto, making it the model for its genre throughout Europe. Celebrated during the late baroque period, Vivaldi's work was neglected after his death. Scholars rediscovering Bach (35) a hundred years later found his transcription of a Vivaldi concerto. That led to Vivaldi's current revival. Unlike the compositions of his student, Bach, Vivaldi music never seems dated. His quartet of concertos, *The Four Seasons*, an early example of orchestral program music, delights every time. Vivaldi composed at lightning speed. As musical director for a celebrated Venetian school, he continuously churned out new compositions. He boasted he could "compose a concerto faster than a copyist could copy it." In all, he wrote more than five hundred concertos, over seventy sonatas, and forty-five operas and religious works. **6,194**

733 THEODOR SCHWANN (1810-1882)

cell's theorist

The truth was right under their noses, but scientists peered into microscopes for almost two hundred years before anyone postulated the theory

that all organisms are made of cells. We gave Leeuwenhoek (107) credit for his microscope and subsequent inspection of blood cells, sperm, and other organisms. For the next two centuries scientists discovered brave new worlds of life but formulated no accurate theories. Schwann worked as a researcher for only five years, but they were highly productive. He discovered pepsin, described yeast as a living organism, and explained cell theory. What Schwann did for animals, Matthias Schleiden, another German biologist, did for plants. Together they presented an accurate portrait of cells, including the membrane and nucleus. When other scientists attacked Schwann for his ideas, he gave it all up and became a mystic. Then he settled down in Louvain, Belgium, and taught anatomy to college students. **6,181**

734 **MOBUTU SESO SEKE** (1930-1997) *African kleptocrat*

Mobutu, the prototype of the Third World autocrat, single-handedly ruined Zaire (now Congo), a mineral-rich nation four times the size of France. From the day he seized power in 1965 until his inglorious flight from rebels in 1997, he looted Zaire, squirreling billions in foreign bank accounts and building a personal fleet of five hundred Mercedes-Benzes while his compatriots' average annual income fell to \$125 from \$225. True, Mobutu restrained communism in Africa and unified a conglomeration of 450 ethnic groups—but at what cost! “Nothing worked there,” wrote author Rand Richards Cooper. “Telephones didn’t work. Electricity didn’t work. Roads had dissolved back into the bush. Policemen robbed people. Atop this pyramid of thieves perched Mobutu.” In a comic twist to the personality cult, Zaire’s evening news opened with a scene showing Mobutu descending from the heavens. On his way, some would say, to hell. **6,150**

735 **SALVADOR DALI** (1904-1989) *reality bender*

Madness made Van Gogh (158) lop off his ear. For Spanish painter Dali, insanity was the life-long source of artistic inspiration. “I dream of cadaverous shapes, distended breasts, oozing flesh,” the self-proclaimed genius wrote. He read Freud’s (15) theory on the erotic significance of subconscious images and was inspired to paint the landscape of his dream world—an approach that made him the leader of surrealism. Consider one of the century’s most famous paintings, *Persistence of Memory*, with its watches melting on a barren landscape. Or *Daddy-Longlegs of the Evening—Hope*, showing a child-angel shielding his eyes from a penis-cannon firing a decomposing horse. A breast also oozes from the cannon, and a limp woman, broken in two on a branch, plays a liquid violoncello. “The limpness, the viscousness, the gelatinousness do portray in my mind the vital feeling I long had of my body and of the life of my being,” Dali said. The artist-paranoid once encountered Freud, who found Dali’s tottering mental state fascinating. **6,131**

736 **QUEEN MARGARET** (1353-1412) *unifier of Scandinavia*

What chutzpah! After Margaret’s father died, she convinced the Danish council to ignore daddy’s heir and name her five-year-old son Olaf king. Margaret ruled as regent until Olaf almost ruined everything by dying suddenly at age seventeen. No woman had ever reigned as Denmark’s queen, but Margaret didn’t let a few laws of succession stand in the way. She adopted her six-year-old nephew and had herself named the “sovereign lady” of Denmark and Norway. When the Swedish nobles agreed a month later to accept Margaret as their “rightful master,” they dubbed her “Lady King.” Meanwhile, rumors abounded

in Norway that Olaf wasn't really dead. Margaret managed to convince her subjects that the man who would be king was an imposter because he lacked Olaf's huge wart on his neck. Margaret remained sovereign of Norway, Sweden, and Denmark, Europe's second largest territory, until her death from the plague. **6,122**

737 ALEXANDER NEVSKY (c.1220–1263)
*Russian hero with a
sycophantic streak*

Grand Duke Alexander of Novgorod was the sainted dynastic forefather of the czars. Even the commissars of the Soviet Union revered him. Alexander was a young warrior prince when he saved his homeland from the Swedes on the River Neva in 1240; hence his name Nevsky. In 1242 he beat the Teutonic Knights in a battle on frozen Lake Peipus, a struggle as important to Russia's nationalistic pride as the battles of Lexington and Concord are to America's. Alexander knew how to kowtow, too. He appeased Russia's Tatar overlords to gain a measure of independence for his kingdom and helped the Tatars suppress his own brothers' rebellions. Alexander, always hostile to Roman Catholicism, was canonized by the Russian Orthodox Church during the reign of his sixteenth-century descendant, Ivan the Terrible. **6,103**

738 FRIEDRICH VON HAYEK (1899–1992)
*worst nightmare of
government central planners*

The Austrian-born British subject first challenged British economist Keynes's (201) tax-and-spend gospel with his get-the-government-off-our-backs libertarianism at the height of the 1930s Depression—and was laughed out of academia. Hayek kept tilting at the Keynesian windmill, getting a direct hit with his 1944 diatribe

against socialist collectivism, *The Road to Serfdom*. But it wasn't until the 1980s that the windmill finally collapsed. That's when Reagan in America and Thatcher (719) in Britain took up the free-market cause that he and disciples like Milton Friedman (731) espoused. "Hayek's central insight," wrote Friedman, "was that coordination of men's activities through central direction and through voluntary cooperation are roads going in very different directions: the first to serfdom, the second to freedom." **6,082**

739 MATTEO RICCI (1552–1610)
*bridge between the
cultures of East and West*

Ricci, an Italian Jesuit missionary who mastered Chinese and studied the Chinese culture, was allowed entry into the traditionally closed society in 1583. Over the next twenty-seven years, he introduced Christian teaching to the Ming dynasty through his writings and often-heated debates with leading Buddhist scholars. His book *History of the Introduction of Christianity in China* was published in the West. Ricci made conversions among the Chinese, but it was slow going. "The fruit here is at the stage of sowing rather than that of harvest," he wrote. Cultural clashes were inevitable. Once Ricci shocked townspeople with the carved wooden crucifix he carried. They summoned soldiers, who threatened to beat Ricci and his entourage. He tried to explain the Christian's relationship to the crucified Christ, but they didn't understand. "It's really not good to have someone looking like that," one Chinese villager said. **6,065**

740 RAY KROC (1902–1984)
he did it all for you

McDonald's corporate biography claims that a staggering ninety-six percent of Americans scarfed

down fast food at McDonald's in the past year. Sound impossible? In 1994 the master of fast food sold its 100 billionth hamburger. The instantly recognizable golden arches began with Dick and Mac McDonald, who developed a simple menu of shakes, burgers, and fries, sans silverware. Kroc bought the name and the quick preparation method, then marketed it to the max. Since Kroc's intervention in the lone hamburger restaurant outside Pasadena, California, in 1955, the company has built its arches in eighty countries. It buys five percent of the U.S. edible potato crop for fries and sells about \$26 billion worth of fast food annually, edging out Mom and apple pie as America's emblems. Kroc built his empire with good old American elbow grease. "Work is the meat in the hamburger of life," he confided. **6,033**

741 **FRANZ BOAS** (1858-1942) *nurturing anthropologist*

People who say that race determines intelligence are now viewed as hopeless bigots. But at the turn of the twentieth century, many serious researchers, influenced by Charles Darwin (7), believed that the brains of nonwhites were biologically inferior. We salute anthropologist Franz Boas for teachings and writings—like his 1904 article "What the Negro Has Done in Africa"—that routed the determinists and taught that culture is what counts in human development. Boas left his native Germany to escape anti-Semitism and from 1899 to 1937 headed the anthropology department at Columbia University. There he taught Margaret Mead (379), Ruth Benedict, and other famous anthropologists his techniques for studying disappearing aboriginal cultures. Boas also did field work among the natives of Canada and Siberia. But his central contribution was to refute the nativists of the so-called civilized world. **6,012**

742 **HELMUT KOHL** (b. 1930) *unifier of Germany*

In 1982 a left-wing political foe warned that a victory of the supposedly bumbling, slow-witted Kohl in upcoming elections "would be a disaster" for West Germany. Well, the six-foot-four, three-hundred-pound, sauerkraut-loving conservative not only won, he became the nation's longest-reigning German chancellor since Bismarck. And far from driving his country to ruin, he presided over its triumph: the destruction of the Berlin Wall in 1989 and the \$600 billion fusion of the two Germanys into a single capitalist fatherland. His other legacy may prove just as enduring: leashing Germany to Western Europe by monetary union, thereby containing the Teutonic penchant for adventurism that has cost the world so dearly. In 1993 *Der Spiegel* prematurely proclaimed "the end of the Kohl era." Five years later, he was still riding high. **6,005**

743 **PIERRE DE COUBERTIN** (1863-1937) *reviver of the Olympics*

Like a runner in the four-hundred-meter hurdles, French educator De Coubertin overcame all the obstacles to win world support for resumption of the Olympic games after a fifteen-hundred-year hiatus. The Greek government balked at financing the competition in Athens, so money was raised privately to reconstruct the ancient Olympic site. On April 6, 1896, a jubilant De Coubertin joined the crowd of seventy thousand to hear King George of Greece proclaim the opening of the First International Olympic Games. They featured 311 athletes from thirteen nations. De Coubertin hoped the competition, besides easing world political tensions, would inspire youths to study ancient history. "They need something more alive, more real," said De Coubertin, president of the International Olympic Committee from 1896 to 1925.

"Olympic dust is what excites their emulation best and most naturally." Thanks to De Coubertin, the world pauses every two years to watch the best athletes compete. However, his dream of world peace through athletics has been elusive. In 1936 Hitler staged the Berlin games to demonstrate Aryan superiority, but American black sprinter Jesse Owens made the "master race" eat his dust. And in 1972 black-hooded terrorists slaughtered Israeli wrestlers at the Munich competition. **6,002**

744 RALPH NADER (b. 1934) America's Don Quixote

He never lets up. In rumpled, ill-fitting suits and army-issue shoes, Nader marches through life tilting at windmills and, unlike literature's Don Quixote, sometimes knocking them down. Nader and his dogmatic "gift of rage" have championed consumers since 1965, when his bestseller *Unsafe at Any Speed* exposed automakers' lack of interest in safety and singled out the Chevy Corvair. Four years later, when General Motors took the Corvair off the market, its sales had slumped ninety-five percent. Nader has taken on just about everybody and everything—from Congress to insurance companies to Giants Stadium (artificial turf injures players). "We have government by the Exxons, of the DuPonts, and for the General Motors," Nader charged as he accepted the Green Party's 1996 presidential nomination. He's behind the Consumer Product Safety Act and the Freedom of Information Act. He crusaded for seat belts, airbags, no-smoking sections, and a fifty-five-mile-per-hour national speed limit. Okay, so he lost the last one. You can't win 'em all. **5,988**

745 EDUARD BERNSTEIN (1850–1932) socialist with a human face

For the first half of his life, he was an ardent Marxist, but he realized that the collapse of capi-

talism was not around the corner, as Marx had predicted. So he shifted gears. Bernstein's 1898 book, *Evolutionary Socialism*, made him the leader of the German socialists who rejected communism and believed that the political system as it existed could be a vehicle for bringing about safe factories, better wages and hours, and health and retirement benefits. His German Social Democratic Party, and socialist parties like it in other countries, helped make the industrialized West safer for the working class. Bernstein's biggest failure was his inability to get white-collar workers to join his party; the year after his death, the petite bourgeoisie flocked to the Nazis. **5,966**

746 ALFRED HITCHCOCK (1899–1980) master of the macabre

Janet Leigh gets it in the shower in the nail-biter *Psycho*; Cary Grant (952) carries a luminous glass of milk up the stairs in *Suspicion*; Jimmy Stewart clings to a ledge in *Rear Window*. Hitchcock was responsible for some of movies' most memorable scenes. He didn't talk much about why he liked thrillers, except to trot out that apocryphal tale of being locked in jail as a boy for five minutes after he had done something naughty. He confessed to scaring easily and traced his fear of the dark to the time his parents left him alone at night. The most universally recognizable film director, the rotund Hitchcock showed up in cameo roles in most of his fifty-four films and hosted a weekly TV suspense program. Hitchcock lamented that he and his literary hero, Edgar Allan Poe, were captives of suspense. "If I was making 'Cinderella,' everyone would look for the corpse," he said. **5,932**

747 EDWARD BERNAYS (1891–1995) original spin doctor

What Barnum (94) did with elephants and midgets, Bernays did even better with subtlety

and psychology. Perhaps it came naturally because he was Freud's (15) nephew, but Bernays knew how to get people to do exactly what he wanted. He coined the highfalutin phrase *public relations* for a business designed to lead people where they don't know they want to go. He called his strategy "the engineering of consent." In a career that spanned most of the twentieth century, he improved the images of presidents, including the taciturn Calvin Coolidge. He revived the failing hairnet industry, convinced women it was okay to smoke in public, and got children to wash with Ivory soap. When fashionable women refused to smoke Lucky Strikes because the green package clashed with their clothing, he manipulated consumers and manufacturers with green parties and balls. Green became the color of the season, and Lucky sales soared. **5,910**

748 SÉBASTIEN LE PRESTRE DE VAUBAN (1633-1707) *engineer whose forte was forts*

Siegecraft used to be a military science as important as nuclear bomb-building became; Vauban was the Robert Oppenheimer (80) of his age. Vauban learned engineering from a Carmelite priest, and as a rebel soldier against France's Louis XIV (63), he helped build his first fortress, Clermont. In 1655 he switched sides and led the forces that destroyed it. Over the next half century he built 160 fortresses and directed forty sieges, helping Louis dominate continental Europe. Vauban's lasting contribution was a method of trench warfare that saved attackers' lives by giving them cover from defenders' cannons. Finally Vauban became an exponent of mobile warfare when he realized that swift-moving armies, not bricks, are a country's best defense. His remains were dug up and scattered by French revolutionaries, but his heart was

recovered in 1808, and Napoleon (16) had it buried in the vault of a Paris church. **5,872**

749 CHARLES PROTEUS STEINMETZ (1865-1923) *night light to America*

Steinmetz, a bearded hunchback with an ever-present cigar in his right hand, fled to the United States from Germany to escape a crackdown on socialists. A brilliant mathematician, he turned his genius to electrical engineering at a research company owned by a fellow German refugee. His discovery of the law of hysteresis, which describes electrical power loss resulting from alternating magnetism (got that?), helped launch the electrification of America. To snag the loyal Steinmetz, General Electric had to buy his benefactor's company. Steinmetz was also an early ecologist, railing against pollution from burning coal, and a campaigner for the rights of the disabled. He gave himself his own middle name, Proteus, after the sage of Greek mythology who could assume many shapes if caught but, if he were held fast, would always return to his original form—a deformed dwarf with love in his heart. **5,843**

750 FRIEDRICH WILHELM BESSEL (1784-1846) *star marker*

From his Königsberg observatory, German astronomer Bessel accurately measured positions of about fifty thousand stars. This helped the scientific community determine distances between stars, understand planetary orbits, and grasp the scale of the universe. Bessel began with a painstaking eighteen-month observation of the star 61 Cygni in the constellation Cygnus. Scotsman Thomas Henderson was pondering the same problem, but Bessel published his findings first. Later Bessel also speculated that blips in Uranus's orbit were caused by an unknown planet, thus

opening the way for the discovery of Neptune. When young, Bessel was apprenticed to a commercial firm in Bremen but spent his free time studying astronomy and mathematics. By age twenty he had fine-tuned two-hundred-year-old calculations on the orbit of Halley's comet and shown them to noted astronomer Heinrich Olbers. An astonished Olbers persuaded Bessel to become a professional astronomer. Olbers called this his greatest contribution to astronomy. **5,820**

751 JEAN NIDETCH (b. 1923) weight watcher

Here's another success story: Jean Nidetch lost seventy-two pounds and kept them off. She also spawned a \$30 billion-a-year industry when, as a dumpy thirty-eight-year-old housewife, she gathered six fat friends in her Queens, New York, apartment for a weekly weigh-in and moral support session. The year was 1963; iceberg lettuce and tuna fish were about the only diet products; and dieters were supposed to stop eating anything that tasted good. Nidetch used the common sense diet that was given away free by the New York Department of Health. She dubbed her group Weight Watchers and began charging two dollars a week for members. Imitators sprang up, but none were quite as successful as the original. Nidetch sold the company to Heinz in 1978. With more than one million members, Weight Watchers lends its name to a monthly magazine and dozens of diet foods that not only promote weight loss but actually taste good. **5,817**

752 ALBERT CAMUS (1913–1960) writer for a disillusioned century

If the people of the year 3000 want to understand the state of humanity in the twentieth century, they will need but three novels, all by Camus: *The Stranger*, *The Plague*, and *The Fall*. The cen-

tral characters in these books—a murderer, a doctor, and a self-loathing lawyer—dramatize the absurdity of life and the redemption achieved by confronting that absurdity. Camus was an editor of *Combat*, the voice of French resistance in World War II, and a leader of the postwar literary of Paris. Leftist existentialist gadfly Jean-Paul Sartre was his best pal until 1952, when Sartre denounced Camus for being an anti-Communist and worse: an optimist. But when Camus was killed in a car crash, Sartre wrote, "His stubborn humanism, strict and pure, austere and sensual, delivered uncertain combat against the massive and deformed events of the day." **5,815**

753 JUAN PERÓN (1895–1974) Don't cry for Juan, Argentina

"If Argentina were an orange, Peron would be the juice," the saying went, and decades later many Argentines defined themselves by their attitude toward the founder of the populist *Peronista* movement. President of South America's second-most-populous country from 1946 to 1955 and again in 1973–74, Peron was actually a right-wing dictator. He set himself up as the defender of the poor workers he called the "shirtless ones," advocated state intervention in the economy, tweaked Uncle Sam's nose, and admired Mussolini (460) and Hitler (20) as strong leaders. He himself was a softie, an animal lover with "penguin arms" who had a weakness for teenage girls. He derived his political strength from the bed-hopping babe who seduced first him, then Argentina—Eva Duarte, the *Evita* of Andrew Lloyd Webber's fantasies. **5,800**

754 STEPHEN CRANE (1871–1900) writer of uncompromising realism

Crane's early death from tuberculosis silenced a powerful literary voice whose novel, *The Red*

Badge of Courage, has become an American classic. Written when Crane was only twenty-five, it was, he said, "a psychological portrayal of fear" set against the Civil War. "This young man has the power to feel," said writer Ambrose Bierce. "He knows nothing of war, yet he is drenched in blood." Crane later witnessed the horrors of battle as a journalist reporting on the Spanish-American War in 1898. Earlier, his assignment to cover the Cuban insurrection in 1896 left him shipwrecked off Florida, adrift for thirty hours. That adventure produced "The Open Boat," a short story masterpiece. Critics couldn't pigeon-hole Crane, labeling him an impressionist, decadent, realist, naturalist, even romantic. He said he was merely a "true artist" who "leaves pictures of his own time as they appear to him." **5.799**

755 **MARY CASSATT** (1845-1926) *the impressionist from Pittsburgh*

She's the Rodney Dangerfield of the art world—Mary Cassatt gets no respect. Perhaps this is because she was the only American in her impressionist group; perhaps because she was struggling in a man's world; perhaps because she favored maternal subjects. No matter. We include Cassatt for just those reasons, and one more: she financially backed the only art dealer willing to sell the French impressionists' work and steered rich American buyers to him. Despite her father's objection that "I would rather see you dead," Cassatt became an artist. Childless, she often chose feminine and domestic subjects in contrast to the landscape and urban scenes her colleagues favored. Cassatt drew inspiration from her platonic relationship with the confirmed misogynist Edgar Degas (482). When he saw prints Cassatt had completed for her first solo exhibition, Degas commented: "I am not willing to admit that a woman can draw that well." **5.790**

756 **ROBERT LOUIS STEVENSON** (1850-1894) *writer of tales kids love*

After Scottish novelist Stevenson died in his home in Western Samoa, literary critics dismissed his books as adventure tales lacking literary merit. Maybe so, but a century later the world reads *Kidnapped*, *Treasure Island*, *The Master of Ballantrae*, *A Child's Garden of Verses*, and *The Strange Case of Dr. Jekyll and Mr. Hyde*, the book that made Stevenson famous in 1886. He may have been on cocaine when he wrote it. Stevenson burned the first draft because the sexual imagery was too strong for his wife Fanny, a crabby bourgeois American ten years his senior. He suffered from tuberculosis, and the adulation of the masses failed to dispel his gloom because he wanted to be considered a serious writer, like Herman Melville (716). "There must be something wrong in me or I would not be popular," he lamented to a friend. **5.777**

757 **TULSIDAS** (1532-1624) *messenger of universal love*

His monumental *Sacred Lake of the Deeds of Rama* has had an enduring impact on Hindu culture. Mohandas Gandhi, for one, devoured its ideals. Little is known of Tulsidas's life, save that his parents abandoned him as a child because he was born under an "unlucky star," but his epic is filled with the power of religious passion. He taught a doctrine not unlike Christianity: God, or Rama, is a benevolent father, and all men and women are brothers and sisters. In one psalm to Rama, he writes: "Those who consider other men's women as mothers and others' wealth as more poisonous than poison, those who rejoice to see others flourish and are acutely pained to see them afflicted, those to whom Thou art dearer than life, in their minds is Thy blessed abode." **5.768**

758 SAMUEL PEPYS (1633–1703) recorder of life's tumult and tedium

Pepys's disarmingly candid writings of public and private affairs capture life in Restoration England, making his eleven-volume diary the most famous literary journal in world history. Industrious Pepys rose from tailor's son to secretary of the admiralty. For nine years he kept a diary affording an insider's view of ordinary and extraordinary events. We are there as Pepys witnesses the Great Fire of London in 1666: "It made me weep to see it," he wrote. "The churches, houses and all on fire and flaming at once, and a horrid noise the flames made." In June 1665 Pepys watched thousands flee the plague. "By water to Whitehall, where the Court full of waggons and people ready to go out of town. The Mortality Bill is come to 267." Pepys "turns his head to us across the centuries," wrote biographer Richard Ollard, "and addresses us as though we were across the room." **5,730**

759 ELIZABETH BARRETT BROWNING (1806–1861) love poet

How do we love her? Let us count the ways. We love her for the depth and breadth and height of her *Sonnets from the Portuguese*, the most popular collection of love poems in English. That slim volume of fourteen-liners found inspiration from her own touching love story. Elizabeth Barrett, a frail invalid, became a celebrity with publication of her first book, *Poems*, in 1838. Poet Robert Browning (608) liked it so much that he struck up a correspondence. Love blossomed. Their courtship, despite her father's objections to the poor, younger Robert, inspired Elizabeth's most compelling work. Browning called her his "little Portuguese," and *Sonnets*, published in 1850, was dedicated to him. Elizabeth, considered during their lifetimes the more talented poet of the pair, has lost stature because of her sometimes-

schmaltzy sentimentality. Her vow to Robert, for example: "If God choose, I shall but love thee better after death." **5,725**

760 GEORGE ORWELL (1903–1950) Big Brother's biographer

Two of Orwell's frightening but entertaining novels have taught the dangers of propaganda and other forms of dictatorial mind control. In *Animal Farm* a group of Bolshevik-style pigs captures a farm. In 1984 the state is controlled by an anonymous, all-knowing Big Brother. Orwell abandoned a career as a policeman for the iffy business of literature, and his first book, *Down and Out in Paris and London*, was rejected by one publisher on the advice of poet and critic T. S. Eliot (720). *Homage to Catalonia*, a memoir of Orwell's months as an antifascist soldier in the Spanish Civil War, is one of the best war books of the twentieth century. Orwell believed that democracy was fragile, even in England, though he said that totalitarianism could never flourish in a country devoted to cricket. **5,684**

761 JEAN-BERNARD-LÉON FOUCAULT (1819–1868) scientific swinger

Foucault was a French inventor who proved that the earth rotates. We like him because of the utter simplicity of the pendulum he created to establish a law of physics. In 1851 he suspended a sixty-two-pound ball on a 220-foot steel wire from the dome of the Pantheon in Paris. The ball swung back and forth, the plane of its motion unchanging with reference to the stars but shifting against the rotating planet below. Apparently Foucault's pendulum, which is still swinging at the Conservatoire des Arts et Métiers in Paris, exerts a hypnotic fascination on viewers; a character in the novel *Foucault's Pendulum* by the Italian writer Umberto Eco says, "You feel a very strong sensation—the

idea that everything else is in motion and up above is the only fixed point in the universe." Foucault also helped develop a technique for measuring the speed of light, but it was his pendulum that earned him his scientific stature. **5,682**

762 JAMES MCNEILL WHISTLER (1834–1903) *artist son of a famous mother*

Whistler, a proponent of art for art's sake, defined the role of artist in modern society by rejecting Victorian admonitions that art should convey a moral message. "Art should be independent of all clap-trap—should stand alone, and appeal to the artistic eye or ear," Whistler declared. He produced striking portraits, paintings of nighttime London, masterful pastels, brilliant etchings, and lithographs. His most famous portrait, *Arrangement in Gray and Black*, is known as *Whistler's Mother*. The artist posed his mother standing, but she flagged and flopped in a chair. American-born Whistler studied painting in Paris, then moved to London. He cultivated an eccentric image but took his work seriously. When a review of *Nocturne in Black and Gold: the Falling Rocket*, blasted Whistler for "flinging a pot of paint in the public's face," he sued and won the celebrated case. But the damages were so paltry, Whistler had to declare bankruptcy. **5,678**

763 JOHN HARVARD (1607–1638) *college benefactor*

Harvard, the son of a London butcher and member of the Massachusetts Bay Colony, was a Cambridge man with a firm commitment to education. Thus, when he died at age thirty-one, Harvard bequeathed half his estate—a whopping £780—and his library of 320 books to the fledgling college, then two years old and struggling. Harvard College, the first in the colonies but the fourth in the New World, had a rocky

start. The first headmaster was dragged into court for beating students and subordinates, and his wife confessed to serving them "ungutted mackerel" and failing to supply them with enough beer. As we enter the next millennium, Harvard is the United States' most prestigious university and counts among its graduates U.S. presidents and a host of other global movers and shakers. Today it is one of the world's best-endowed colleges, and its library collection numbers more than eight million volumes. **5,670**

764 WILLIAM S. GILBERT (1836–1911) *Victorian satirist*

Arthur Sullivan wrote the music. But the brilliance of Gilbert and Sullivan's comic operettas is in Gilbert's satirical thrusts at stuffy conventions, his silly rhymes, and his madcap staging, starting with their first show, *Thespis*, in 1871. That show, *H.M.S. Pinafore*, *The Pirates of Penzance*, *The Mikado*, and ten other collaborations set the tone for all subsequent musical comedy. Gilbert was a master of the one-liner; he invented the joke, "Call me a cab"; "Yes sir, you're a cab." When an ample ingenue sat down during a rehearsal, Gilbert declared, "I always knew you'd make an impression on the stage." He drowned in a lake at age seventy-five while trying to aid a girl struggling in deep water. To highbrows who scoff, we say of Gilbert what he said in *Patience* about aesthetes like Oscar Wilde (574); "Though the Philistines may jostle, you will rank as an apostle." **5,661**

765 HERBERT OF CHERBURY (1583–1648) *godfather of deism*

Never heard of him? Well, this English courtier's challenge to religious orthodoxy echoes through the centuries, even into many churches and synagogues of modern America. Unlike Calvin (69) and Luther (3), Herbert wasn't trying to reform

organized Christianity in his writings; he was blasting away at its foundations. Caught up in the rationalist ferment inspired by Bacon (84) and Descartes (25), he rejected divine revelation and said reason was the only sure path to truth. He believed in God and asserted that religious impulses were implanted in man by God, but otherwise, he decided, God just sort of sat back and watched his creation unfold. Herbert's concept of God as a passive observer of human affairs spread, and several of America's founding fathers, including Benjamin Franklin (54) and Thomas Jefferson (64), essentially embraced deism. **5,656**

766 MUDDY WATERS (1915–1983) *he had a right to sing the blues*

Born McKinley Morganfield, he earned his childhood nickname because he liked to play in the Mississippi River's muck. Muddy Waters's influence in bringing the blues, once the exclusive domain of black musicians, into music's mainstream is incalculable. When his band booked gigs in noisy Chicago nightclubs, he turned up the volume by switching to an electric guitar. His mournful laments, such as "Got My Mojo Workin'" and "Hoochie Coochie Man," introduced blues to Carnegie Hall in the 1950s. A successful appearance at the Newport Folk Festival in 1960 again drew applause from white audiences. Later in his career he fretted that blacks were turning away from the blues "because the blues recalls hard times, when you was struggling to make a living." Dubbing music his "religion," Muddy Waters set the beat for generations of musicians, including legends Bob Dylan (888) and the Rolling Stones. **5,640**

767 IZAAK WALTON (1593–1683) *nature boy*

Walton's *The Compleat Angler* is more than a book about fishing. It is the most enduring how-

to book of the millennium, and it exhorts us to love things that "nature utters in her rural shrine," as William Wordsworth (577) wrote in a poem praising Walton. Walton was an ironmonger-turned-church-deacon and biographer of friends such as John Donne (280), but his true love was sitting by a stream and catching trout, perch, pike, salmon, or carp. He recommended the right frogs to use as bait (yellow ones) and commended the eating of grayling (mixed with honey, it would cure swarthinness). He warned that no dull man could be taught the art of fly-tying. Some men loved hawking, hunting, tennis, and mistresses, he conceded, "But these delights I neither wish / Nor envy, while I freely fish." **5,620**

768 DANIEL EDGAR SICKLES (1825–1914) *first killer to win freedom through a plea of temporary insanity*

In 1859 Sickles shot his wife's lover to death. In those days, murderers got the noose. What to do? "The Devil made me do it," Sickles claimed, and the jury bought the argument. Sickles led an eventful life, helping create Manhattan's Central Park, losing a leg in the Civil War, botching a job as a military governor in the Reconstruction South, and seducing the queen of Spain as ambassador to Madrid. But it was his trailblazing acquittal that earned him a place in judicial history and in the hearts of evildoers everywhere. As we write this, the lawyer for a teacher who killed and ate a student was petitioning for his client's release because "he is now able to handle stress successfully." Which just goes to show that the temporary insanity plea is, well, ins-a-a-a-n-e. **5,616**

769 BUCKMINSTER FULLER (1895–1983) *dome designer*

Fuller's geodesic dome, the strongest, most cost-effective structure ever invented, can be erected

swiftly and airlifted to sites. It symbolizes architect and engineer Fuller's global approach to solving housing problems by doing more with less. A navy flyer during World War I, he lived with his family on base. After his daughter died from a series of illnesses, Fuller blamed the inadequate housing. That tragedy, compounded by business failure, pushed him close to suicide. Instead, he spent two years in silence, contemplating life. He emerged with his unique vision of world peace obtainable only through comprehensive housing design. If everyone could share in the earth's bounty, Fuller theorized, war would be unnecessary. He attracted a cult following, and his futuristic domes were erected on selective sites throughout the world. "I just invent," he said. "Then I wait until man comes around to needing what I've invented." Fuller gets our kudos as a forward thinker for the third millennium. **5,600**

770 CHARLES FREDERICK WORTH
(1825-1895) *fashioner*
of haute couture

Sure, Worth was a genius for design (after all, he invented the bustle), and he certainly had an eye for fabric, but let's give credit where credit is due. His best client, Empress Eugénie, discarded dresses after only one wearing, in keeping with the etiquette of aristocratic women in France's Second Empire. They changed clothes twice a day. Worth, an Englishman who arrived in Paris at age twenty and worked his way up to ownership of a shop on the Rue de la Paix, charged the equivalent of about \$64 for his simplest dress. Eugénie helped the House of Worth's reputation by routinely passing her hours-old dresses to her attendants, who in turn sold them to Paris's elite partiers. Of course, mass circulation of trendy fashion magazines also fueled the fire for French fashion on both sides of the Atlantic. **5,585**

771 OU-YANG HSIU (1007-1072)
Confucian reformer and poet

China's Sung period, 960-1279, was a time of intellectual and political flowering. Next to the great Chu Hsi (93), the brightest bud was a member of the ruling oligarchy, Ou-yang Hsiu. He reformed the bureaucracy, helped bring Confucianism—the religion of tradition—back to power over Buddhism, and wrote poetry that sings, even in translation. His description of a cicada: "Here was a thing that cried / Upon a treetop, sucking the shrill wind / To wail it back in a long whistling note." He was famous early in his career for railing against incompetent, nepotistic public officials and equally famous late in life for saying radical reformers had gone too far. Ou-yang Hsiu certainly was no democrat. In 1055 he recommended that books by commoners critical of the government should be burned. **5,572**

772 MOTHER TERESA (1910-1997)
Heaven-sent do-gooder

The daughter of an Albanian grocer, Mother Teresa founded the order of the Missionaries of Charity in Calcutta in 1948 and later established a home for the dying in the city's slums. By 1997 the order was active in one hundred countries, including the United States. Mother Teresa traveled widely, opening a soup kitchen in the Bronx, bullying the pope into installing a shelter inside the Vatican, and helping evacuate mentally ill children from the fighting in Beirut in the 1980s. "We didn't expect a saint to be so efficient," exclaimed a Red Cross official. Her defense of Roman Catholic beliefs inspired loathing in some quarters. One screed asserted she was an evil old woman. Somehow, though, we find it hard to imagine the five-foot nun, dressed in her white sari and sandals and praying,

"Let us thank God for our people, the poor people," consorting with the devil. **5,509**

773 MORDECAI ANIELEWICZ (1919–1943) *hero of the condemned*

Anielewicz and his forces battled to the death rather than submit to extermination in Hitler's ovens. Their courage during the Warsaw ghetto uprising of World War II marked an end to European Jewry's passivity to oppression. When the Germans occupied Warsaw, they sealed off the Jewish quarter and imprisoned 400,000 there. Mass deportations and executions over nearly four years shrank those numbers to about 60,000. In April 1943 Nazis thought they could annihilate the rest in a three-day assault. But Commander Anielewicz and the Jewish Fighting Organization battled from bunkers for over a month before they were silenced. "What has happened has exceeded our dreams," Anielewicz wrote shortly before his death. "Jewish armed resistance and the retaliation have become a reality." Dylan Thomas urged his dying father, in a poem, "Do not go gentle into that good night." Anielewicz didn't. **5,498**

774 TONI MORRISON (b. 1931) *"Beloved" African-American author*

When Morrison won the Nobel Prize for literature in 1993, some critics described her as the greatest living American author. Not everyone was enthusiastic. Columnist Edwin Yoder, for example, called her "an eccentric selection." He conceded, however, that he'd never read her novels. Morrison, the first African-American to win literature's top prize, gave literary voice to the black experience. Her first novel, *The Bluest Eye*, published in 1970, blasted prejudice and stereotypes through the story of a poor black woman who wishes for white people's eyes. *The Song of Solomon*, which appeared in 1977, celebrated the tradition of story-

telling in black culture. "Parents don't sit around and tell their children those classical, mythological archetypal stories that we heard years ago," she lamented. Morrison predicted wrongly that no one would read her novel about the slave experience, *Beloved*. It became her most popular book and won the Pulitzer Prize in 1988. **5,492**

775 ANDREI SAKHAROV (1921–1989) *bomb-maker turned peacenik*

We could argue that the cold war ended on December 16, 1986, when Soviet president Mikhail Gorbachev (237) telephoned Sakharov to announce the release of an army of political prisoners. Centuries of Russian oppression were soon over. Protected from the gulag because he was a national hero—he had built the first Soviet H-bomb in 1953—Sakharov spent two decades pushing for peace with the West and human rights at home. The work won him the Nobel Peace Prize in 1975. Harassment by the secret police, the loss of his job as a physicist, internal exile in the city of Gorky for nine years, and forced feedings during a hunger strike did not deter him. His heroism was a rallying point for those who helped topple the Soviet Union from within. **5,491**

776 HEINRICH SCHLIEMANN (1822–1890) *excavator of Homer's Troy*

A flamboyant German-born American who married a Greek schoolgirl at the age of forty-seven, Schliemann made a fortune trading indigo in Russia and gold dust in San Francisco before turning his attention full time to archaeology. As the world watched enthralled, he directed a massive dig at Hisarlik, in present-day western Turkey, that culminated in the 1873 discovery of the "Treasury of Priam," the king in the Homeric epic, and other Trojan remains. A few years later, he unearthed the "Mask of Agamemnon," the

death mask of the king who led the Greeks against Troy, in the Bronze Age city of Mycenae. Despite accusations that have dogged his reputation to this day of fabricating some of his evidence, Schliemann was a giant of archaeology and the first great popularizer of his field. **5.474**

777 BARTHOLD GEORG NIEBUHR (1776-1831) *historiography's hero*

The German historian's method of analyzing ancient texts to extract facts from the tapestry of truth, myth, and fabrication, a talent he displayed in his three-volume history of Rome, opened a new chapter in Western scholarship. Niebuhr inherited his obsession with accurate detail from his father, the explorer Carsten Niebuhr. "When we read Caesar, he would spread out D'Anville's map of ancient Gaul on the table, and I had to find every place," Barthold recalled. At age ten he wrote a history of Africa and at sixteen dazzled a local poet as a "miracle of knowledge and intellectual maturity." The German scholar Theodor Mommsen said all historians worthy of the name are Niebuhr's pupils. Niebuhr himself proclaimed, "In laying down the pen, we must be able to say in the sight of God, 'I have not knowingly nor without earnest investigation written anything which is not true.'" **5.465**

778 EUCLIDES DA CUNHA (1866-1909) *writing rebel of the backwoods*

Cunha's book, *Rebellion in the Backlands*, was the first literary protest against Brazil's injustices to the rural poor. To commemorate his effort, Brazilians honor his memory with a week-long observance every August. Journalist Cunha wrote a compelling eyewitness account of the War of Canudos, which pitted federal forces against cult leader Antonio Conselheiro and his farm-worker followers in Canudos, a backwoods village they

called their "empire." Beginning in 1896, wave after wave of ever-strengthening military muscle failed to suppress these monarchist rebels who refused to recognize the authority of their state government and were labeled heretics by the Catholic Church. Finally the minister of war waged a full-scale military assault with an artillery bombardment that decimated the settlement and massacred everyone. Cunha's book pleaded for a government commitment to bring people of mixed race into the cultural mainstream. **5.460**

779 EMILY POST (1872-1960) *etiquette's expert*

She minded your manners. During World War II people stole Post's *Etiquette* book from libraries the way they take Bibles from hotel rooms. Sales soared after war correspondent Ernie Pyle reported that her book was, in fact, the bible of army officer training schools. *Etiquette*, which sold more than a million copies in her lifetime and remains on library shelves, doled out Post's down-to-earth advice, tempered by her wit, on everything from a presidential visit to a whirlwind wartime wedding. Post, a magazine writer, wrote the book at the behest of her editor. After publication of the first edition of *Etiquette* in 1922, Post became a syndicated columnist and radio host. She cautioned girls against frequenting cabarets, warned everyone but Fred Astaire away from dapper walking sticks, and reminded readers that the best manners "do not suggest 'manner' at all." **5.403**

780 FERNÃO LOPES (c.1380-c.1460)¹

Lopes had an idea that was unusual for his time: He based his history books on documents and evidence instead of hearsay. He was Portugal's royal

1. *father of the footnote*

archivist in 1434 when King John I asked him to chronicle the previous reigns, starting in the 1380s. Lopes took his information from state papers and moldy records in monasteries. Before he wrote about wars, he walked the battlefields. When he disagreed with a previous writer's slant, he said why and quoted from long passages of primary sources to make his case. And in his writing of his *Chronicles of Pedro, Ferdinand, and John I*, the humbly born Lopes eschewed the overblown flattery of kings that make other medieval historians' objectivity suspect. We won't violate Lopes's principles and write about his early life and death; there's no information on that in any archive. **5.396**

781 MARIE-ANTOINETTE (1755-1793) *French queen who lost her head*

It took the impotent Louis XVI seven years to consummate his marriage to his Austrian-born queen, Marie-Antoinette. What's a lonely wife to do? Decorate. The money for the garden at the Petit Trianon palace near Versailles could have fed a hundred thousand peasants for a year, and she also spent lavishly on parties, concerts, and dressing up. There's no evidence that she ever said "Let them eat cake" when she heard of a shortage of bread. But her spendthrift ways inflamed the masses against the very notion of royalty, and helped intensify the French Revolution. She and her husband were so accustomed to free spending, they set aside the equivalent of \$2 million for an ostentatious flight from revolutionary Paris when they should have slipped to safety quietly. They were caught, and when it was her turn to face the guillotine, she did so without tears, like a true queen. **5.347**

782 TOUSSAINT-L'OUVERTURE (1743-1803) *Haiti's opening to independence*

François-Dominique Toussaint, the son of an African king, led the Haitian independence

movement during the French Revolution, freed the slaves, and established a black-ruled French protectorate. He took the name L'Ouverture, French for "opening," from a remark by a French official that, in attacking enemy lines during his conquest of Haiti, "this man finds an opening everywhere." Under him Haiti prospered, and the United States was sufficiently alarmed to bribe him not to invade the American South. France's Napoleon (16), calling Toussaint "that miserable Negro," ordered the recapture of the former colony in 1802. The following year Toussaint was imprisoned in the French Alps. A fighter to the end, he castigated his jailers for taking his watch and money and demanded their return "to my wife and children on the day I am executed." The year after his death Haiti became the second independent nation in the Americas, after the United States. **5.338**

783 ALEXANDER CALDER (1898-1976) *artist with the right moves*

Calder launched the art movement known as kinetic sculpture by inventing the mobile, an abstract design of metal, steel rods, and wood, moved by motors, wind, or water. Son and grandson of illustrious sculptors, Calder first opted for mechanical engineering. Then he saw painter Piet Mondrian's (797) Paris studio with its colored rectangles of paper pasted on the walls and thought it might be fun to make those rectangles move. Hello, mobile. Calder's largest creation soars 140 feet at the Federal Reserve Bank in Philadelphia. His reputation soared, too, after his Museum of Modern Art exhibit in 1943. Artist Fernand Léger ranked this burly American among "those incontestable masters of an inexpressive and silent beauty." Calder's sister, Margaret Hayes, said he refused to have anything in his home—whether pots and pans or staircase

steps—that wasn't well designed. That's because, Calder explained, "bad taste boomerangs." **5,304**

784 LOUISE BROWN (b. 1978) *baby in a bottle*

She made a spectacular splash even before her birth. George Orwell meets Dr. Spock. Her conception in a test tube—actually, a petri dish—and her birth in Great Britain gave birth to futuristic treatments for infertility. While in vitro fertilization remains a last-ditch and costly procedure, more than 100,000 babies have been born through the technology begun by Robert Edwards and Patrick Steptoe. They were a team: Edwards, the obstetrician who wanted to help infertile couples, and Steptoe, the researcher fascinated with the mechanisms of conception. Brown was the fruit of their labor. Oh, yes, she's the biological daughter of John and Lesley Brown. But in a very special way she was fathered by Edwards and Steptoe. After Brown completed her schooling, she went to work, appropriately, we think, at a day-care center. We recognize Edwards and Steptoe for their breakthrough in the treatment of infertility, but unable to choose between them, we give the nod to the baby they (and the Browns) produced. **5,292**

785 JACKSON POLLOCK (1912-1956) *Jack the dripper*

Realist painter Thomas Hart Benton said of his pupil, "Pollock was a born artist. All I ever taught him was how to drink a fifth a day." He became the general public's best-known master of abstract expressionism—the dominant painting style of the twentieth century—by making the dripping of paint on canvas a signature technique. At his first show of splatter paintings in 1948, he sold only one, for \$150. He became famous a year later when *Life* magazine asked in a headline, "Is He the Greatest Living Painter in America?" Art critic

Clement Greenberg suggested he was, though a museum curator spoke for many people when he said of Pollock's work: "I suspect any picture I think I could have made myself." Two years before he killed himself driving drunk, Pollock sold his painting *Blue Poles* for \$6,000. It was resold for \$2 million in 1973. **5,218**

786 GEORGE FOX (1624-1691) *the first Quaker*

At first we thought Fox might be a stretch for our list. After all, the English sect he founded counts only 200,000 adherents worldwide. But then we reviewed the causes Quakers have championed—the abolition of slavery, women's rights, prison reform, nonviolence—and that was all the Friendly persuasion we needed. Fox preached that an inner light from Christ takes precedence over church creed. He likewise loathed official oaths and titles. His group, the Society of Friends, was nicknamed the Quakers because he once admonished a judge to "tremble at the name of the Lord." The pacifist Fox told one follower, William Penn, the son of a British admiral and the founder of Pennsylvania, "Wear thy sword as long as thou canst." Weeks later, he asked, "Where is thy sword?" Penn replied, "I wore it as long as I could." **5,197**

787 JONATHAN EDWARDS (1703-1758) *preacher of an angry god*

He was the foremost theologian of Puritanism in America. In his writings Edwards tried to resurrect the zealous spirit of Puritan forefathers. In 1741 congregants in Enfield, Connecticut, shrieked for salvation as Edwards delivered his now-famous sermon "Sinners in the Hands of an Angry God." He warned, "The God that holds you over the pit of hell, much as one holds a spider, or some loathsome insect over the fire,

abhors you, and is dreadfully provoked . . . and yet it is nothing but his hand that holds you from falling into the fire every moment.” Edwards launched a religious revival that spread along the Connecticut River valley in 1734. And this helped spark the Great Awakening, a massive spiritual frenzy from Massachusetts to Georgia. Although his image is that of a fire-breathing evangelist, Edwards also was a respected scholar and prodigious writer. On strolls through meadows he was even known to burst into song, delighted at God’s creation. **5,169**

788 **WERNER FORSSMANN** (1904–1979) *invader of the human heart*

When the chief of surgery at a clinic near Berlin refused to let Forssmann attempt a catheterization of a patient’s heart, Forssmann did the next best thing: He catheterized himself. In a daring experiment in 1929, Forssmann enlisted the help of a nurse who held a mirror for him as he inserted an oiled tube that was normally used for bladders into his arm. The nurse then helped him walk upstairs to the X-ray department, where he tracked the tube by fluoroscope. After Forssmann’s paper on his experiments was published, some researchers called him a charlatan and he lost his job. Forssmann, who abandoned cardiac research and became a urologist, was vindicated in 1956 when he shared the Nobel Prize with two other surgeons who pioneered catheter technology. Today doctors use cardiac catheterization and its stepchild, angioplasty, as a routine procedure that allows them to diagnose and treat heart ailments. **5,155**

789 **ROBERT BADEN-POWELL** (1856–1941) *founder of scouting*

He made his fame as the general who led the heroic British stand at Mafeking in the Boer War

and created the Boy Scouts in 1907 to teach kids to be as brave and resourceful as the men he had commanded in battle. Boys occupied with outdoor pursuits and community service, he reasoned, would learn self-reliance and be too busy to engage in bad habits like cursing, smoking, gambling, and masturbation. He also founded the Girl Guides, the model for the Girl Scouts. Recent biographers have noted that Baden-Powell enjoyed watching naked boys bathe and developed excruciating headaches after marriage, at age fifty-six, to a woman thirty years younger. But we have no interest in outing this outdoorsman. What counts are Baden-Powell and scouting’s influence in teaching millions of kids to appreciate good deeds and the glories of nature in the increasingly mechanistic and urban twentieth century. **5,104**

790 **ROBERT THE BRUCE** (1274–1329) *liberator of Scotland*

Bruce’s rebellion against the immense power of the English throne has been called one of history’s greatest heroic enterprises. On the run after crowning himself Scottish king in 1306, Bruce supposedly hid in a cave and watched a spider failing time and again to secure his web but never giving up until he succeeded. Drawing inspiration from the arachnid’s adamancy, Bruce went forth to engage the oppressor. When an enemy knight charged him with his lance but “myssit the nobill kyng,” in the words of a contemporary, Bruce swung down his ax with such force that he split his poor adversary’s head in two. He could also be kind, once halting his army to comfort a washerwoman in labor. He gained Scottish independence by demolishing Edward II’s forces in the Battle of Bannockburn in 1314. To our mind, that makes him a good auld boy. **5,091**

791 **INDIRA GANDHI** (1917-1984) *Indian prime minister with mass appeal*

Gandhi, daughter of Jawaharlal Nehru (222), dominated India's political scene for two decades. Prime minister for four terms, she was a steely ruler who inspired either hate or adoration. On her watch India won its war with Pakistan in 1971, resulting in the creation of India-friendly Bangladesh. When accused of election violations, Gandhi declared a state of emergency, imprisoned opponents, and suspended democracy for nineteen months. But the crowds forgave her. India's poor and downtrodden loved her, believing she understood their plight. Domestically Gandhi continually battled threats to national unity. An army attack on the Sikhs' holiest shrine—where separatists were storing ammunition—killed 492 Sikhs in June 1984. Five months later, Gandhi was shot to death by bodyguards who were Sikh extremists. In her will she avowed: "No hate is dark enough to overshadow the extent of my love for my people and my country." **5,048**

792 **PETER CARL FABERGÉ** (1846-1920) *eggstraordinary jeweler*

He learned the jeweler's craft in Italy, Germany, and France, and the family business he headed in St. Petersburg in 1870 created some of the most beautiful objects of the millennium. His best baubles were made for the Russian royal family every Easter from 1885 to 1917. The gem-encrusted "eggs" had surprises inside; the 1897 egg hid a miniature gold replica of the coach that Czar Nicholas II rode to his coronation. Rothschilds, Texas millionaires, and the king of Siam bought Fabergé's jewelry, silverware, stone miniatures, bejeweled clocks and picture frames, onyx and nephrite figurines, and lifelike flowers carved from colored stones. "Fabergé is the greatest

genius of our time," the czar's mother wrote in 1914. World War I and the Russian Revolution destroyed Fabergé's business, but his trade name, purchased by a company known mostly for perfume, still connotes elegance. **5,033**

793 **CYRUS MCCORMICK** (1809-1884) *the reaper's keeper*

McCormick was the inventor of the mechanical reaper. His earliest reaper cut as much grain as twenty-four laborers with sickles. Inadvertently it aided the Union cause in the Civil War. With his machines harvesting wheat, thousands of men could be freed to beef up Northern forces, a factor credited with securing Union victory over the smaller Southern army. But McCormick never set out to change history. He was just an entrepreneur who knew a good invention when he saw it. Never mind that his reaper was patented six months after Obed Hussey's; McCormick had the savvy to corner the market. He also loved a good fight. In 1862 he sued the Pennsylvania Railroad when family luggage was misrouted and destroyed. He won, but the railroad appealed. The case ricocheted to the Supreme Court five times. Finally the court ordered the railroad to pay up. It did, with interest. By then McCormick was dead. **4,981**

794 **JULIUS II** (1443-1513) *papal patron of the arts*

The Italian Giuliano della Rovere sought magnificence for the papacy and, to that end, commissioned sublime works by Bramante (258), Raphael (129), and Michelangelo (13). Raphael painted frescoes for Julius in the Vatican. Bramante was chosen to design a new basilica for St. Peter's in Rome. Michelangelo's assignment was to paint the ceiling of the Sistine Chapel, a feat he accomplished over four years with the close

supervision and friendship of Julius. As the project wore on, the impatient Julius threatened Michelangelo that if he didn't finish soon, he'd have him thrown off his scaffolding. Michelangelo recognized a real warning from Julius when he heard it and worked at double speed. For all of Julius's artistic refinement, he lacked the priestly virtues. As cardinal, he fathered three illegitimate daughters. Also, he became pope by buying the office in 1503, then immediately decreed that such purchasing practices were banned. **4,974**

795 CHARLIE CHAPLIN (1889–1977) silent star

In 1914, during a lull in filming for *Mabel's Strange Predicament*, Chaplin entertained his fellow actors by pasting on a paper moustache and doing antics with a cane and derby. "Put that in the picture," director Mack Sennett suggested. So was born the Little Tramp, the character whose popularity did much to launch movies—particularly Hollywood movies—as the transcendent form of international popular culture of the twentieth century. Chaplin, Douglas Fairbanks, and Mary Pickford (962) were the royalty of Hollywood between the world wars, but Chaplin had a flaw: a lust for teenage girls, three of whom he married, including playwright Eugene O'Neill's (426) daughter Oona. Chaplin had retained British citizenship, and in 1952 he was driven from the United States by tax trouble, publicity about his morals, and his refusal to shun Communist friends. He settled in Switzerland and in death is a star subject in the study of film as art. **4,963**

796 THOMAS BABINGTON MACAULEY (1800–1859) peddler of progress

He was a reform politician and wrote colonial India's penal code, but Macauley the history

maker was dwarfed by Macauley the history writer. As the first great practitioner of narrative social history, the Englishman is the author most closely associated with the idea—exposed in the twentieth century as wishful thinking—that history is the story of mankind's march from ferocity to humanity, from ignorance to light, from tyranny to democracy. In his 1828 essay "History," Macauley called for stirring factual accounts of the "noiseless revolutions" of the common people that made positive changes occur. Just such a book was his 1848 *History of England from the Accession of James II*, an account of the Glorious Revolution of the seventeenth century. The book sold three thousand copies in its first ten days of publication and was read as avidly as books by Walter Scott (357) and Charles Dickens (70). **4,962**

797 PIET MONDRIAN (1872–1944) new Dutch master

Nobody would confuse Mondrian's paintings of straight lines and rectangles with works by anyone else, and his style influenced the movement toward minimalism in architecture and fashion in the mid-twentieth century. First he painted bad imitations—a *faux* Pierre Renoir (384) here, a mock Dante Rossetti there—but he produced his first work in his mature style in 1916 and rarely painted a curved line or a representational form after that. A solitary bachelor, he spent a lot of time sitting and thinking in rooms as spare as his paintings. The Nazis enhanced Mondrian's reputation by including two of his paintings in their 1937 exhibition of what they believed to be execrably decadent art, and when war came, he fled to New York City. At a 1943 exhibit there he said a work by then-unknown Jackson Pollock (785) was the best painting he had seen in years. **4,961**

798 DAVID BUSHNELL (1742-1824) builder of the first fighting submarine

Bushnell constructed the *Turtle*, an egg-shaped vessel of wood reinforced with iron hoops. This one-man propeller-operated sub could plunge twenty feet and remain submerged for thirty minutes. In 1776 rebels sent the *Turtle* in an unsuccessful foray against the British fleet blockading New York Harbor. *Turtle's* pioneering work didn't save that day, but it led to years of experimentation and refinement. By World War I the Germans were using submarines, called U-boats, to torpedo Allied ships. During World War II both sides had submarines prowling the depths. Today supersubs carry atomic missiles. While use of submarines for ocean exploration is increasing, they largely remain machines of destruction. Renaissance visionary Leonardo da Vinci (9) feared as much. He wouldn't show anyone his designs for a submersible craft "on account of the evil nature of men," he said, "who would practice assassination at the bottom of the sea."

4,905

799 THOMAS HUXLEY (1825-1895) Darwin's bulldog

Fearing ridicule when he wrote *The Origin of Species* in 1859, Charles Darwin (7) said, "If I can convert Huxley I shall be content," and he was. "How exceedingly stupid not to have thought of that," biologist Huxley said when he read Darwin's theories, and he devoted the rest of his life to preaching evolution. Unlike the conservative Darwin, Huxley conceded the possibility of apes

in mankind's family tree. Huxley was a self-educated genius born above a butcher shop. He started conducting biology experiments when he was a naval surgeon, never met a fossil he didn't like, and rose to the heights of Britain's scientific establishment. After his oldest son died of scarlet fever, Huxley, the unwavering agnostic, wrote that even if his entire family faced imminent death, he would not try to save them by praying to God. Aldous Huxley wrote *Brave New World*, but it was his grandfather Thomas who helped Darwin create it.

4,877

800 JOHN CHAPMAN (1774-1845) Johnny Appleseed

Chapman, a professional nurseryman, wandered forty years through Ohio, Indiana, and western Pennsylvania, clearing land and planting apple nurseries. The fruit nourished pioneers on their westward journey. He collected seeds from cider presses, then sold seedlings to frontier folks. Chapman made some money but also gave away thousands of seeds to pioneers. Settlers gave him his nickname, and the friendly, nature-loving eccentric spawned Bunyanesque legends. People believed he slept in a treetop hammock, played with a pet wolf, and cavorted with bears. "When a folktale attains the status of a myth and embodies a cherished ideal of the people," said Chapman's biographer Robert Price, "then its true worth no longer lies merely in the dead facts that may have inspired it, but in the new, living, and creating force that it has become in the present."

4,867

We scoff at people who say history is boring. Granted, rote memorization of the causes of the War of the Roses and oh-so important dates like December 20, 1620, is sure to make you snooze. But we assert that the past is fascinating when it re-creates the personal stories of people who, little by little, changed the world. We want to tell you about the folks who invented candy bars, aspirin, champagne, the remote control zapper, and laser beams. And about the greatest singer in the Arab world. And a Japanese filmmaker whose movies are art. And an African-American who energized his rage into a philosophy of equality.

We wanted this book to be more than a litany of great dead dudes—you know, presidents, generals, and founding fathers. History books are a-changin' along with the times, as Bob Dylan might say, but it took creativity to smoke out the stories of people who subtly altered our lives. We posed quirky questions: Who invented chess? Where did painkillers come from? When did homeopathic medicine begin? And why does Santa Claus wear a red suit and smoke a pipe? You'll find the answers in this next group.

We scoured dusty reference books to come up with Friedrich Serturmer, Miyan Tansen, and Francois-André Philidor. Nope, they don't show up in history survey texts, but you'll discover in

this next group of one hundred just how they've changed the world.

Sure, when it comes to history, you can't get away from warriors who sacked, pillaged, and ruled the world throughout the millennia. But we also want you to know about the contributions of a sweatshop reformer, a magazine editor who popularized mass culture, an advocate for the mentally ill, and the matriarch of modern dance.

Yes, you'll find a great number of predictable names (look for Brigham Young, Robert Frost, David Sarnoff, and George Gallup, for starters), but we like to think that this group of one hundred is especially rich in little-known people who revolutionized your world a little bit at a time.

801 **EL CID** (c.1043–1099) *national hero of Spain*

Russia has Alexander Nevsky (737), Britain has Alfred the Great, and France has Joan of Arc (83). Spain has its national hero, too: El Cid. He was a master Christian warrior who won battles against great odds and was the first general to defeat the Almoravid clan of Muslims, which controlled Spain in the eleventh and twelfth centuries. An equal-opportunity soldier, he battled Christians, too. His name comes from *sayyid*, Arabic for "lord." Two years after his death—in bed, by the way—the Almoravids recaptured Valencia, the site of El Cid's greatest victory, and held the city for 130 years. In 1929 historian Ramón Menéndez Pidal pumped up El Cid's reputation with his book *El Cid and His Spain*. Despite inaccuracies, it placed El Cid on a par with the great national heroes of Europe. **4,842**

802 **GREGORY XIII** (1502–1585) *calendar fixer*

We wouldn't give Pope Gregory the time of day if he hadn't created the modern calendar. A millennium and a half after it was used by the Romans, the 365-day Julian calendar was moving faster than the seasons; by 1582 the calendar was out of sync with the equinox, and churchmen were concerned because the link between holidays and their traditional seasons was breaking. Gregory made a momentous decision. He decreed that the day after October 4, 1582, would be October 15. Henceforth years at the end of each century would be leap years if they were divisible by 400 (1900 no, 2000 yes). Many non-Catholic countries ignored the reform. George Washington celebrated his birthday on February 11 before 1752, when England and America switched. The calendar is now almost perfect; in 3,300 years it will only be one day ahead of the seasons again. **4,816**

803 **JOHANN STRAUSS** (1794–1849) *Viennese waltz king*

The waltz craze of the early nineteenth century was a milestone in cultural history. It was the first dance to combine sensuous grace and peasantlike athleticism—a formula repeated in popular dance sensations ever since, from the tango to the jitterbug to the macarena. The far-from-prudish Lord Byron (385) was so scandalized by the body contact required by the waltz, he considered it a prelude to rape. A German doctor predicted that overindulgence would cause mental illness. Queen Victoria (91) certainly didn't care; composer-conductor Strauss played at her coronation eve ball, and she was swept off her feet. Johann Jr. (1825–1899) wrote "Blue Danube." But Strauss senior's 251 compositions established the model, and his touring orchestra was as popular as any rock group today. **4,793**

804 **WILLIAM PITT THE ELDER** (1708–1778) *freedom-loving British imperialist*

That might sound contradictory today, but it made sense in the eighteenth century. Pitt presided over Britain's transformation into a great imperial power, notably by outwitting the French in the Seven Years War. "He made England the first country in the world," English historian Thomas Macauley (796) said. But Pitt also loved freedom. His nickname was the "Great Commoner" for his defense of constitutional rights. America is forever in his debt for standing up to mad King George (452) and urging an end to taxation without representation. "The Americans are the sons, not the bastards of England," he declared in Parliament. Pitt, though plagued by "gout in the head" (manic-depression), managed to educate his five children himself, often conversing with them in Latin. One of those children, William Pitt the Younger, became

prime minister at age twenty-four and rivals his father in fame. **4,730**

805 HENRY DE BRACTON (d. 1268) lawgiver

He was a royal clerk, archdeacon, and judge in the time of English king Henry III and at his death left a book, *On the Laws and Customs of England*. It was his country's first great legal treatise. Bracton explained how specific judicial decisions interpreted the statutes, notably the law that protected landholders from arbitrary eviction. Bracton's most famous line was, "the king should not be under any man, but under God and law." (That's *Rex non debet esse sub homine, sed sub Deo et lege*, for those who don't trust legal principles that aren't in Latin.) Bracton's notion that rulers are subject to the law is a pillar of democracy. Chief Justice Edward Coke (282) used Bracton's book to argue against the divine right of kings when James I (879) tried to foist that theory on the English in the seventeenth century. **4,702**

806 MAX WEBER (1864-1920) workaholics' best excuse

Weber's great book, *The Protestant Ethic and the Spirit of Capitalism*, explored the relationship between Calvinist dogma and the beginnings of modern capitalism. It was an analytical tour de force that admirers say rivals *Das Kapital* and in some ways—its emphasis on objectivity, the exactness of its methodology—surpasses Marx's (14) great oeuvre. To oversimplify a bit, Weber noted that according to the Calvinist doctrine of predestination, God has already decided whether you will go to heaven or hell, and there's nothing you can do about it. But wait! If you lead an exemplary life—working hard but living simply—surely that is a *sign* that God loves you. So Protestants worked their tails off, triggering

modern capitalism. The neurotic son of a Calvinist mother and authoritarian father, Weber wrote on topics as varied as the nature of bureaucracy, American Indians, and the "piano as the instrument of the middle classes." **4,681**

807 MIGUEL HIDALGO Y COSTILLA (1753-1811) el padre de Mexico

Hidalgo was just a country priest with flair—he loved dancing the minuet, hunting, and street bowling—when he seized the moment. Facing arrest as a member of a secret society opposed to Spanish rule, he rang his church bell to summon his tiny flock of farmhands and cowboys to insurrection. Incredibly, the revolt spread, and Hidalgo led an army of sixty thousand to the gates of Mexico City. But he was defeated and captured and soon thereafter repudiated the revolution, lamenting "the multitude of souls that dwell in the abyss because they followed me." Was it a forced confession? All we know is he requested candy for his executioners. Though he failed, Hidalgo is revered as the father of his country. Not bad for a man whose name, derived from the words *hijo de algo*, means simply "son of somebody." **4,662**

808 HERBERT SPENCER (1820-1903) evolutionary English philosopher

In 1840, for the first and last time in his solitary bachelor life, Spencer flirted with a girl; the next year he was fired from his job as a railway engineer. "Got the sack—very glad," he wrote in his diary. So Spencer had no job or loved one to distract him from starting his life's work: writing books that applied evolutionary theory to biology, psychology, and sociology. The popular appeal of his writings made Spencer a champion of evolution to a skeptical public. *Principles of Sociology* helped found the modern study of sociology, though few scholars now think, as did the determinist Spencer, that the

world is moving in fits and starts toward a perfect harmony of the individual and society. Spencer occasionally clung to outdated theories. He believed that he inherited beautiful small hands because his immediate ancestors were members of the nonlaboring class. **4,659**

809 **PIERRE TEILHARD DE CHARDIN** (1881–1955) *mystic for the modern age*

As science and religion spun apart in the twentieth century, Teilhard sought to fuse them back together. Both a world-famous paleontologist and a Jesuit, he developed a theory about humanity's evolution to a higher state—"the fantastic Cosmogogenesis revealing itself before our eyes." Science was in his bones. When he was six, his frantic parents found him miles from his home in Auvergne, France, making a beeline toward the mountains "to see what is inside the volcanoes." But his greatest passion was his faith; the great-great-grandnephew of the atheist Voltaire (36), he said his role in discovering Peking Man's skull made him "madly in love with the Divine Influence which governs the World." His own influence was to make the secular world take another look at that good old-time religion. **4,612**

810 **WILLIAM WILBERFORCE** (1759–1833) *scourge of the slave trade*

Wilberforce shamed Britain, and Britain the world, into outlawing one of the most ancient human evils. In young adulthood, the amiable Wilberforce seemed destined for no higher a calling than sipping port in the gentlemen's clubs of London. But in 1785 John Newton, a former slave trader and author of the hymn "Amazing Grace," converted him to evangelical Christianity and impressed upon him the horrors of the traffic in human flesh. Two years later his Cambridge chum, William Pitt the Younger, the famous prime minister, urged him

to take up freedom's cause in Parliament. From then on Wilberforce doggedly fought to end the slave trade and was the chief force behind the Slavery Abolition Act of 1833—enacted one month after his death. It would be decades, of course, before slavery was banned in the United States and parts of Latin America. **4,598**

811 **BEN JONSON** (1572–1637) *Shakespeare's little brother*

Jonson was the only English Renaissance playwright and poet to give Shakespeare (5) a run for his shillings. Jonson's most famous line, "Drink to me only with thine eyes, / And I will pledge with mine," has set hearts a-pounding for four centuries. (Never mind that he had a complexion "like a rotten russet apple when 'tis bruised," according to one contemporary.) His comedies, like *Volpone* and *The Alchemist*, expose the foibles of his age with biting satire. He was a favorite of King James I (879) and a hero to a group of younger poets called the sons of Ben. Shakespeare even acted in one of his plays, and the two men engaged in "wit-combats" in taverns. For all that, as a contemporary of Shakespeare, this one-time bricklayer's apprentice and literary light will be eternally judged against the supernova of the bard from Stratford-on-Avon. **4,517**

812 **BRIGHAM YOUNG** (1801–1877) *Moses of the Mormons*

That's what they called Young, who had a major impact on development of the American West. The former carpenter assumed leadership of the Church of Jesus Christ of Latter-Day Saints when founder Joseph Smith was murdered in 1844. Continuing threats prompted Young to lead his flock from Illinois to Salt Lake City, Utah, where the Mormons established settlements in 1847. "This is a good place to make

Saints, and it is a good place for Saints to live," Young declared. They called the area Deseret and named Young governor. But public outcries over Mormon polygamy (Young had twenty-seven wives) and the Christian sect's power led the United States to send a military expedition to Utah in 1857. Young was forced out as governor but remained president of the church, effectively ruling Utah until his death. Today his followers number 9.5 million, constituting one of the world's fastest-growing religious groups. **4,496**

813 **LEON BATTISTA ALBERTI** (1404-1472) *Renaissance know-it-all*

An anonymous reader wrote in the margins of an early edition of a book by the Florentine humanist, "Is there anything this man doesn't know?" He wrote perceptively about philosophy, mathematics, morality, music, architecture, painting, and optics. Plus, he was a legendary showman; he wowed audiences by throwing coins high enough to hit the ceiling of the highest cathedral. Most of his ideas were incorporated by greater practitioners. "Leonardo Da Vinci was to Alberti as the finisher to the beginner," Jakob Burckhardt wrote in 1860. A few of Alberti's edifices are still standing, but his best contributions were treatises on perspective and architecture, though some scholars praise him more for the spirit than the substance of his lessons. He was among the first to preach the Renaissance creed: Happiness and morality are achieved by action, creation, and reason. **4,461**

814 **ALEXANDER CARTWRIGHT** (1820-1892) *baseball's rule maker*

Every fan has opinions. Ken Griffey, Jr., is better than Joe DiMaggio was. The designated hitter rule stinks. Pete Rose belongs in the Hall of Fame, and Don Drysdale doesn't. Here's a fact: Abner Doubleday didn't invent baseball. It evolved over

hundreds of years. But if anyone was father of the game, it was Cartwright, a bank clerk who wrote the first rule book, played on the original organized ball club, the New York Knickerbockers, and helped arrange the first recorded contest—Hoboken, New Jersey, October 6, 1845. Cartwright established such basics as three-strikes-you're-out and nine men on a side. His finest achievement was putting the bases ninety feet apart, creating a magical balance between offense and defense. Cartwright joined the California gold rush in 1849 and later moved to Hawaii. If there is baseball in heaven, he's the commissioner. **4,438**

815 **HANS-JOACHIM PABST VON OHAIN** (b. 1911) *builder of the first jet plane engine*

High on the list of the 1,000 Dumb Mistakes That Saved The World was Adolf Hitler's (20) decision to deemphasize the development of jet warplanes at the beginning of World War II. If *Der Führer* had shelved Werner von Braun's erratic rockets and built more fighters powered by Ohain's turbojet engines, the Allies might have been swept from the skies. Ohain's Heinkel HE-178 flew in August 1939, but production stalled, and by 1944 when a few German jet fighters became operational, it was too late for the Germans. Britain's Frank Whittle designed a jet in the 1930s, too, but his government was even less interested than the Germans. After the war Von Ohain joined the army of German scientists who became U.S. citizens, and he worked on military projects. The last we heard, he was living in Florida, an eight-hour jet plane ride from Berlin. **4,405**

816 **JERZY NEYMAN** (1894-1981) *statistical phenomenon*

We blame Neyman for taking the suspense out of democracy; pollsters using Neyman's teachings

announce who won elections before the voting booths close. The ones who said in 1948 that Thomas Dewey, not Harry Truman (485), would be president were not paying attention. In papers between 1928 to 1938, Neyman wrote the mathematical principles that instruct statisticians how to test hypotheses, make samples the right size, and reduce the risk of error. He built on work by his teacher Karl Pearson, who invented the term *biometrics*, but if you have to choose which is the father of the modern poll, why not the Pole? "We have all learned to speak statistics with a Polish accent," said colleague David Kendall, bowing to Neyman's vast influence. Neyman studied and taught in Warsaw, but he settled in Berkeley in 1938 and made the University of California a mecca for students of statistics. **4,390**

817 HENRI TOULOUSE-LAUTREC (1864–1901) poster boy of the art world

He was Vicomte de Toulouse-Lautrec, but you'd never know it from the subjects he painted. Contemporaries produced traditional portraits and academic nudes, but Lautrec captured actresses, dancers, and prostitutes in Montmartre haunts—cafés, theaters, even brothels. His honest paintings (one is the bar scene *At the Moulin Rouge*) were shunned by fellow artists and critics. He fared better with his posters, which vibrate with intense color and flowing lines. We love the series on red-headed dancer Jane Avril. Lautrec raised the poster to creative eminence, said biographer Carlton Lake, because "he achieved more with less than any other artist of the Western World." Lautrec suffered bone disease as a youth and was a misshapen dwarf. Disgusted by his deformity, he turned to heavy drinking and debauchery, dying young. Still, he left his mark on successors like Picasso (149), and helped set the course of avant-garde art. **4,387**

818 MARTHA GRAHAM (1894–1991) dance revolutionary

Who gets a front page, above-the-fold obituary in *The New York Times*? Statesmen, dignitaries of the highest order, the publisher's mother, and—well, Graham. How fitting that America's newspaper of record acknowledged that Graham did for dance what Stravinsky (183) did for music. Graham said she was inspired to revolutionize classical ballet movements after she saw an abstract Wassily Kandinsky (451) painting. "I will dance like that," she said. Graham established modern dance as a separate force outside ballet and then ruled for more than sixty years as its Grande Dame. She formed her own New York dance company, choreographed more than 180 dances, and often cast herself in the starring role. From her New York debut in 1926 until her retirement from the stage at age seventy-five, Graham said she eschewed realism in favor of "life through movement." **4,381**

819 CHARLES H. TOWNES (b. 1915) laser-sharp physicist

Townes was sitting on a bench in Franklin Square Park in Washington, D.C., admiring azalea blossoms when he was zapped by the possibility of lasers. The year was 1951, and Luke Skywalker wasn't even a gleam in Darth Vader's eye when the notion of harnessing the force came to Townes. When Townes hashed out the idea over lunch with his students at Columbia University in New York City, they invented the acronym *laser*, for Light Amplification by Stimulated Emission of Radiation, and *maser* for the microwave device that would produce the effect. The actual laser was first produced by Theodore Malman in 1960, but Townes gets credit for focusing scientific inquiry on this path. Townes never envisioned just how useful lasers could be.

He thought they would provide a method for precise measurements, but we've got to thank this guy for revolutionizing everything from surgery to supermarket checkouts. **4,341**

820 **LAURENCE OLIVIER** (1907-1989) *lord of the actors*

Though they were separated by more than three centuries, you've got to wonder if Shakespeare (5) had his countryman Olivier in mind when he wrote his plays. After all, Olivier sets the standard by which other performances are measured: Olivier's Hamlet, Olivier's Henry V, Olivier's Richard III, et cetera. His acting career began with Shakespeare—he played Brutus at age nine in London's All Saints Choir School production of *Julius Caesar*. His brother played the title role. Not only was Olivier the twentieth century's best actor, but his screen adaptations of the bard's work revived a fading Shakespeare for new generations. A master of both stage and screen, Olivier wooed women as a romantic leading man. His portrayal of Heathcliff in Hollywood's *Wuthering Heights*, for example, reduces even the hard-hearted to snuffles. Actor Charles Laughton told Olivier that he was so good in the role of Henry V because "You are England." **4,306**

821 **MALCOLM X** (1925-1965) *self-proclaimed* *"Angriest Negro in America"*

Malcolm X called civil rights leader Martin Luther King, Jr. (56), "the best weapon that the white man, who wants to brutalize Negroes, has ever gotten in this country." Born Malcolm Little, he was an angry, street-smart kid who fell into robbery, drugs, gambling, and prostitution. While imprisoned in 1946, he studied the philosophy of the Nation of Islam and replaced his surname with the letter "X." After his release in 1952, he began preaching rage.

Malcolm founded his own militant Muslim mosque and changed his name once again to el-Hajj Malik el-Shabazz. He adopted a more conciliatory tone, moving away from outright support of violence within the civil rights movement, but continuing to assert equality for blacks "by any means necessary." The question of who planned the killing of Malcolm X has generated as many conspiracy theories as the assassinations of both King and President Kennedy. Malcolm's best-selling autobiography and a 1992 Spike Lee film about his life ensured his position as hero for subsequent generations of black youths. **4,262**

822 **IGOR SIKORSKY** (1889-1972) *inventor of the helicopter*

Contemporaries, including the Wright brothers (23, 24), were designing planes that barreled down runways to achieve liftoff. But Russian-born Sikorsky shared Leonardo da Vinci's (9) vision of a machine that could fly straight up. By 1910, though, a frustrated Sikorsky knew the time wasn't right and shelved his plans. He developed a line of successful fixed-wing planes, the S-40s, first in Russia, then in the United States, to which he had emigrated in 1919. In the late 1930s aerodynamic theories and construction techniques caught up to Sikorsky's dream, and he tried again to create an airship with a horizontal rotor. This time it worked. The first VS-300 took off with Sikorsky at the controls in September 1939. Sikorsky foresaw the helicopter performing rescue and relief missions. He probably had no clue that it also would evolve into an offensive weapon, used in Vietnam, Afghanistan, and the Persian Gulf war. **4,212**

823 **JOHN PYM** (c.1584-1643) *Puritan lash of kings*

Pym served in Parliament from 1621 to his death and led the Commons' resistance to the absolute

monarch Charles I. During the Long Parliament beginning in 1640, Pym forced Charles to agree that Parliament could not be dissolved without its consent. But Charles only gave this lip service. "To have printed liberties, and not to have liberties in truth and realities, is but to mock the kingdom," Pym declared. He orchestrated the Solemn League and Covenant, a treaty with Scotland, and in January 1644 a Scottish army invaded England to join Parliamentary forces battling the royalists. Years later when the monarchy was restored, Charles II had Pym's body removed from Westminster Abbey and buried in a churchyard. Still, the new regent vowed to honor agreements from Pym's Long Parliament, meaning that the concept of "divine right" was dead and buried, too. **4,186**

824 JOHN GRAUNT (1620–1674) *Grim Reaper's bookkeeper*

His 1662 book compiling and commenting on the births and deaths in London from 1604 to 1661 was a breakthrough in statistical research. He is variously credited with launching probability theory, sampling theory, the science of demographics, and the life-insurance industry. A shopkeeper who got up early to read, Graunt estimated the population of London by extrapolating from the number of annual births, figured out that country folk outlive city dwellers and that women outlive men, and calculated average life expectancy at birth to be sixteen years, though he himself beat the odds by advancing to the ripe old age of fifty-four. Graunt was also an early proponent of workfare, suggesting that London's beggars be put to work, "each according to his condition and capacity." **4,164**

825 J. WILLARD GIBBS (1839–1903) *the quiet man of American science*

While his contemporary Thomas Edison (28) grabbed headlines, Gibbs pondered great

thoughts. His most influential paper, "On the Equilibrium of Heterogeneous Substances," solved many of the problems of chemical manufacture, notably the conversion of ammonia into nitroglycerin (for explosives) and nitrates (for fertilizer). Some consider Gibbs one of the greatest scientists America has produced. The Scottish physicist James Clerk Maxwell (205) recognized his genius but died before he could tell the world. German, French, and Dutch luminaries bowed before him, but America's scientific establishment, uncomprehending, yawned. And he didn't care, figuring posterity would reward him. The bearded bachelor lived with two sisters (and one brother-in-law) in their father's house in New Haven, Connecticut, where he insisted on making salads for the evening meals, on the grounds that he was best qualified to mix heterogeneous substances. **4,109**

826 FELIX HOFFMANN (fl.1893) *headache reliever*

A chemist in a Bayer laboratory in Germany, Hoffmann was assigned the job of developing a safe version of salicylic acid. Pharmacists had known for years that this derivative of willow bark, the stuff of Native American medicine men, was an effective analgesic, but it had a nasty tendency to eat people's stomachs and cause them to bleed to death. Hoffmann, whose father had crippling rheumatism and begged his son for relief, transformed salicylic acid into a safer form—*aspirin*. Doctors prescribed it initially to reduce joint pain and lower fevers, but imagine their delight when they discovered it effectively erased headaches. Hoffmann never got rich on the discovery, but Bayer did. Aspirin was the most popular drug in the United States by 1906. Today thirty billion aspirin tablets are consumed annually in the United States—a sharp increase

since doctors discovered its use in reducing the risks of heart disease. **4,093**

827 SARAH JOSEPHA HALE (1788-1879) *trendsetting editor*

How can you not honor the woman who wrote "Mary Had a Little Lamb" and convinced President Lincoln (32) to make Thanksgiving a national holiday? But forget those things. Hale scores big points as one of the original proponents of a fledgling popular culture. As editor of *Godey's Lady's Book*, the nineteenth-century popular magazine for women, Hale was among the first opinion makers to reach a national audience through mass communication. In fact, the phenomenal success of her publication helped bolster the magazine as a literary format. Hale's writings dictated acceptable behavior for women and glorified the home as woman's proper sphere. Hale and her magazine, which printed the latest fashions from Paris alongside articles by important literary figures, have been credited by historian Barbara Welter with creating the refined, domestic woman celebrated in "The Cult of True Womanhood." **4,042**

828 ROBERT FROST (1874-1963) *poet of the road less traveled*

America's favorite twentieth-century poet immortalized the climate, character, and spirit of New England with his images of woods on a snowy evening and roads that diverge in a yellow wood. Before earning his keep as a poet, Frost worked in a cotton mill, taught school, and spent time as a chicken farmer. He observed, however, that a man who knew the pleasure of molding a metaphor was unfit for other work. Enormously popular in his lifetime, Frost won the Pulitzer Prize four times and served as a goodwill ambassador for the United States. He wrote a poem to

read at the 1961 inauguration of President John Kennedy, but when the glare of the sun was too bright for his failing eyes, Frost stood in front of the Capitol and recited "The Gift Outright" from memory. **4,037**

829 FRANCIS FRY (1803-1886) *the candy man*

For centuries, chocolate was an indulgence of the world's upper classes. Marie-Antoinette (781), that decadent cake-eating queen of France, so lost her head over chocolate drinks that when she traveled, she brought along her own Viennese chocolate maker. The Fry family of chocolatiers not only transformed a ritzy beverage into a solid but marketed it to the masses of sweet teeth. Francis's company in Bristol, England, was first to manufacture a tasty chocolate bar in 1849. Sales of the exotic-sounding "Chocolat Delicieux à Manger" made J.S. Fry & Sons (Francis was the son who counted) the world's biggest chocolate manufacturer. So we lick our lips and thank Fry, who did it first, but we blow dozens of kisses to Milton Hershey, who did it best. The "Henry Ford of Chocolate," Hershey began manufacturing candy in 1893. As the millennium melted, the Pennsylvania-based company was making 33 million chocolate kisses daily. **4,028**

830 DAVID SARNOFF (1891-1971) *electronic window on the world*

Sarnoff was first to envision radio and television as entertainment media. In 1915, at age twenty-four, he suggested that the Radio Corporation of America could make its product a "household utility" by using airwaves to transmit music. Fast-forward two decades: During the depths of the Depression, after Sarnoff became president of RCA, he invested \$50 million to develop television. When World War II sidetracked television

research, Sarnoff served as General Eisenhower's (374) adviser on communication technology. Nicknamed "the General" in deference to his rank, Sarnoff focused big guns on television after the war and crafted network broadcasting. While its subsidiary, NBC, broadcast shows like *Amos 'n Andy*, RCA sold receivers. Today there are more than 200 million televisions in the United States. Called ruthless by some and a genius by others, Sarnoff was voted "the father of television" by the broadcasters themselves. **4,011**

831 DOM PÉRIGNON (1638–1715) *monk who perfected the "devil's wine"*

He discovered that the secret to sparkling wine is a subtle blend of grapes, imprisoned in a well-shaped bottle, and sealed by a good cork. Dom Pérignon didn't invent the modern glass wine bottle (that came from, of all places, England) or the cork (ancient Greeks, thank you very much), but he mastered the fermentation process at his Benedictine abbey in Champagne. His straw-colored wine with the amusing effervescence that tickled the nose was nicknamed "the bubbling wine that makes corks jump." A favorite at Louis XIV's (63) court, champagne today represents all that is luxurious and decadent. After Pérignon's death, Claude Moët cornered the sparkling wine market, helped in large part by Madame de Pompadour, who ordered about two hundred bottles at a pop. In a gesture to the master, however, the *Dom Pérignon* label, the cadillac of champagnes, was marketed in 1936 by Moët & Chandon. **3,989**

832 FRIEDRICH SERTURNER (1783–1841) *pain's killer*

During the American Civil War, precious drops of morphine were administered to wounded soldiers to erase pain and calm nightmares.

Physicians discovered after the war that they had created America's first massive group of drug addicts who needed daily injections to feed their dependency on this purified form of opium. Morphine today is a painkiller for the terminally ill but is used sparingly elsewhere because of its addictive lure. Serturner, a pharmacist's assistant in Prussia, isolated "morphium" in 1805. He experimented on himself and nearly died of an overdose. Opium had been used as a treatment for centuries, but the beauty of morphine was that doctors could regulate the dosage. By the 1830s morphine was used regularly for pain. It could be chewed, but doctors sometimes blistered the skin and applied morphine to be absorbed. After the hypodermic needle was invented in 1853 by Charles Gabriel Pravaz, morphine injections became commonplace. **3,927**

833 STEPHEN FOSTER (1826–1864) *composer for the good old days*

Last year's hits fade, but not Foster's "Oh Susannah," "My Old Kentucky Home," "The Old Folks at Home," "Camptown Races," and "Jeannie with the Light Brown Hair," a love offering to his wife Jane. German kids still sing "*Ich komm von Alabama, mid der banjoy auf dem knie*." The Pittsburgh-born Foster spurned a career as a bookkeeper and wrote more than two hundred songs, first for the blackface Christy Minstrels and then for sheet music publishers who paid Foster two cents for every score they sold. They may have cheated him; his total take for his most creative years, 1849 to 1860, was a measly \$15,000. Ruined by the alcoholism that eventually killed him, Foster spent the Civil War years dashing off forgettable songs, like "My Boy Is Coming from the War," and sold them to the owners of New York Bowery honky-tonks for fifteen dollars. **3,904**

834 FEDERICO FELLINI (1920-1993) *fantasizing director*

He started as a caricaturist, got into film production while dodging Mussolini's (460) draft in wartime Rome, and cowrote the screenplay for *Open City*, a 1944 masterpiece of naturalism. As a director, Fellini's depictions of Italian society were unrivaled, but his movies are really about Federico Fellini—his childhood in fascist Rimini (*Amarcord*), his wife, actress Giulietta Masina (*Juliet of the Spirits*), the decadence of his rich friends (*La Dolce Vita*), and his artistic struggles (8½). That 1962 movie, starring Marcello Mastroianni, was picked by international critics in 1987 as the best European film of all time. Four of his films, starting with *La Strada*, won Academy Awards for Best Foreign Film. No director of any nationality was as good at making audiences care about sexual and psychic outcasts, be they slum-dwelling prostitutes, failed social climbers, or down-and-out circus clowns. Producer Bernardino Zapponi said, "Fellini loves squalor. It never ages." **3,882**

835 EDWIN DRAKE (1819-1880) *first oil driller*

Before Drake, oil was scooped from pools or salt wells. Drake was the first person to drill for the gooey stuff. On August 27, 1859, his Rock Oil Company drillers hit black gold at sixty-nine feet below Oil Creek outside Titusville, Pennsylvania, and soon they were pumping eight to ten barrels of petroleum a day. Drake's method was to dig to bedrock to tap only the oil veins, not clay, salt, brine, and other junk. Today, from Alaska to Arabia, from Siberia to southern Indonesia, drillers building on Drake's crude technology bring up fifty million barrels of oil a day. Drake stupidly ignored friends' advice to patent his process, and stock market losses claimed the pittance he

earned from oil operations. At his death he was subsisting on a fifteen-hundred-dollar annual pension from the Pennsylvania legislature. **3,866**

836 SIMON STEVIN (1548-1620) *decimal doer*

Multiply $34/68$ by $215/86$, and after a lot of scribbling and common denominator stuff you get $1/4$. Now multiply the same numbers expressed as decimals, 0.5×2.5 . The second way is easier, for which we thank Stevin. His widely translated pamphlet, *The Tenth*, popularized the use of decimals in calculation, coinage, weights, and measures. Stevin taught mathematics to the Dutch ruler Maurice of Orange and was a leading hydraulics engineer—an important job in waterlogged Holland. He invented a drainage windmill that beat back the tides, wrote the best book on water pressure since Archimedes, and supported the Copernican theory that the planets revolve around the sun. Some scholars say Stevin—not Galileo (4) standing atop the leaning tower of Pisa—was the first scientist to drop balls from a high place to prove that weight does not affect the rate of acceleration. **3,862**

837 BONIFACE VIII (1235-1303) *the pope who would be king*

No pope claimed more temporal powers and no pope fell so flat trying, which made Boniface an instrumental figure in the decline of church influence. After engineering the abdication of his ineffective, ascetic predecessor, Celestine V, the nobly born Italian Boniface declared that no clergy could be taxed without his permission. Then, in his famous decree, *Unam Sanctum*, he asserted papal supremacy over all kingdoms. An incensed Philip IV of France had Boniface arrested, and the pope died a month later. Papal power never recovered from his pigheaded arrogance. Poor Dante

(30) was so angry about Boniface's meddling in Florentine politics, he put the pope in hell in the *Divine Comedy*. Predecessor Celestine's comment about Boniface was apt: "He shall come in like a fox, reign like a lion, die like a dog." **3,816**

838 SERGEY DIAGHILEV (1872–1929)

Russian ballet czar

A founder of the Ballets Russes in Paris in 1909, Diaghilev injected new life into this art form with his lavish productions. He attracted greatness: famed dancers Anna Pavlova (245), Vaslav Nijinsky (405), and Michel Fokine; artists Dali (735) and Picasso (149), who created sets; composers Debussy (274), Ravel (855), and Prokofiev (615). Diaghilev brought the world three ballet masterworks by Igor Stravinsky (183): *The Firebird*, *Petrushka*, and *The Rite of Spring*. Although he had a law degree, Diaghilev decided his true calling was patron of the arts. That's tough if you're strapped for cash. But Diaghilev's charm and domineering personality always saved him—except in London in 1921, with his production of Tchaikovsky's *Sleeping Beauty*. Stravinsky thought the impresario had presented "something classical and dignified" demonstrating "the greatness and freedom of his mentality." Critics and public disagreed. The ballet ran only three months—not long enough to save Sergey from bankruptcy. **3,794**

839 PAUL KLEE (1879–1940)

fountainhead for modern art

He was an abstract expressionist, but the Swiss-born Klee's linear style and theory of color also influenced surrealists and nonobjective artists. After rejecting the conformist art classes of his adoptive Germany, Klee searched for a new beginning. He found it in North Africa, where the sun-splashed terrain dazzled him. "Color possesses

me," he wrote. "Color and I are one." Klee was preoccupied with the real versus the unreal. "Art does not reproduce the visible—it makes visible," he maintained. In 1932 the Nazis attacked Klee for his "decadent art," and he left Germany for Switzerland. In deteriorating health, he became obsessed with death, "the tragic path." One of his last paintings, *Death and Fire*, foreshadows his cremation. But carved into his memorial stone is this diary entry: "I cannot be understood in this world, for I am as much at home with the dead as with those yet to be born." **3,778**

840 PELE (b. 1940)

the foot that launched a thousand goals

Edison Arantes do Nascimento, nicknamed Pele, became a Brazilian national hero for his amazing speed and uncanny ability to kick a ball at almost any angle and score a goal. "In Brazil we live, eat and drink soccer," Pele said. And of all Brazilians, he was the leading fanatic. The soccer superstar dominated the sport that dominated the world. In his twenty-two-year career, he scored 1,281 goals when 30 goals a season was considered outstanding. He led the Brazilian national team to three victories in the World Cup. Even North Americans cool to soccer knew Pele's name. He announced his retirement from World Cup competition in 1974, but the following year he accepted a three-year, \$7 million contract to play for the New York Cosmos and promote soccer in the United States. It worked. The sport caught on big-time in schools across the country. **3,751**

841 RICHARD RODGERS (1902–1979)

the sound of the musical

If the musical is America's greatest contribution to world theater, then Rodgers made it so. He shunned musical comedy themes of the early

1920s to strike out in new directions. His music wasn't decoration but essential to the unfolding of the plot. Rodgers's lengthy collaboration with lyricist Oscar Hammerstein II created the unforgettable *Oklahoma!*, *Carousel*, *South Pacific*, *The King and I*, and *The Sound of Music*. His most moving songs include "Younger Than Springtime," "If I Loved You," and "You'll Never Walk Alone." And his thirteen-hour score for the documentary *Victory at Sea* showed he also could write in a classical vein. Rodgers was the rare, well-adjusted artist in a maelstrom of neurotics. Some songwriters plucked inspiration from the air, but Rodgers always needed a story or plot to uncork creative juices. "Songs never come to me," he said. "I have to go after them." **3,737**

842 LOUIS WIRTH (1897-1952) sociologist of the sidewalk

Wirth's classic essay "Urbanism as a Way of Life," published in 1938, unleashed a debate still simmering today. He suggested that life in modern industrialized cities, with their greater density of population and greater anonymity, weakens families and destroys neighborhoods. Many contemporary sociologists dispute that, saying research shows that many city dwellers can maintain strong family ties and a sense of community. But his arguments still exert a powerful influence, both in academia and in the popular culture. Wirth was one of the Chicago urbanists, a group of theorists on city life who gathered at the University of Chicago. He also taught there, founded the American Council on Race Relations, and advised local and federal policy makers. Born in Germany, Wirth emigrated to the United States at age fourteen. From his youth he was committed to social reform. "He became a sociologist," said colleague Eleanor Bernert Sheldon, "because he believed that a science of human

behavior was not only possible but indispensable to social betterment." **3,729**

843 JAYAVARMAN VII OF INDOCHINA (1181-c.1218) the George Washington of the jungle

In the early thirteenth century this Khmer king dominated Southeast Asia. We include him for commissioning the stone shrines of Angkor Thom, a wonder of the world hidden from the West for years in Communist Cambodia. Inscriptions on those shrines say Jayavarman liberated his country from evil invaders. Then his armies ranged from Burma to Malaya. The stones say he was compassionate and built 120 hospitals; they hinted that he had leprosy. That would make anyone compassionate. One inscription says: "His feet were a chaplet of lotus on the heads of all the kings; he overcame his enemies in battle; loaded with jewels of virtue he took the Earth to wife, and gave her his glory for a necklace." **3,683**

844 LANGSTON HUGHES (1902-1967) the Shakespeare of Harlem

Hughes said he was elected class poet in elementary school because he was one of the few black children and "everybody knows, except us, that all Negroes have rhythm." He was so good at it that the title stuck through high school in Cleveland. In search of adventure, he hopped a freighter to Africa and impulsively tossed all his books overboard so he could see the world through his own eyes. Back in New York, Hughes became inextricably linked with the flowering of literature, music, and drama that has become known as the Harlem Renaissance of the 1920s. He was incredibly versatile. He worked as a journalist and wrote short stories, novels, librettos, plays, and most of all, poetry. "What happens to a dream deferred," he asked in a memorable poem that inspired a criti-

cally acclaimed play by Lorraine Hansberry. "Does it dry up like a raisin in the sun?" **3,649**

845 **LEWIS CARROLL** (1832–1898)
the author who peered through
the looking glass and saw Alice

Freudians see sexual references under every giant mushroom in Carroll's classic *Alice's Adventures in Wonderland*. Carroll, the pseudonym of Englishman Charles Dodgson, spun the yarn just to entertain young Alice Liddell on a boat trip in 1886. He wrote it down, then presented the literary gift to the girl. The tale became the most widely read children's story for generations and is still popular today. It couldn't have happened to a weirder Victorian eccentric. Dodgson was a math scholar who became an ordained deacon. Painfully shy with a bad stammer, he relaxed only in the company of children, especially little girls. Some say he fell in love at age thirty-four with famed actress Ellen Terry, then but a teenager. Their bond was a solid friendship, nothing more. Terry later wrote, "He was as fond of me as he could be of anyone over the age of ten." **3,644**

846 **ALGERNON CHARLES SWINBURNE**
(1837–1909) the swooning poet
of Victorian England

The early works of this impressionist poet were so sensual, a critic called him "Swine-born." Smarter contemporaries knew better. John Ruskin read twenty-eight-year-old Swinburne's *Atalanta in Calydon*, and declared, "his foam at the mouth is fine." Swinburne wrote about classical subjects, and there was a simplistic edge to some of his poems, such as today's most famous, "The Garden of Proserpine," with its ending, "even the weariest river winds somewhere safe to sea." His best work used words to create effects never heard before—what his friend and biogra-

pher Edmund Gosse called "the thunder of the waves, and the lisp of leaves in the wind." When he read his poems at parties, Swinburne swooned with fervor, perhaps because one glass of wine made him tipsy. For an effete aesthete, he was unusually jingoistic. He thought England's war on Boer South Africa was just swell. **3,627**

847 **UMM KULTHUM** (c.1900–1975)
the Great Pyramid of Arab song

That is the actor Omar Sharif's phrase, and it barely does justice to the greatest Arab musical performer of all time. A simple country girl, Umm Kulthum mesmerized first her native Egypt and then the entire Middle East with her rhythmic celebrations of love and Arab culture. She captivated both Egyptian king Farouk and the nationalist who overthrew him, Gamal Abdel Nasser (170); she was adored by rich and poor, men and women, young and old, desert dweller and urban sophisticate. At her last concert her voice faltered, tears trickled down her cheeks, and she sang no more. More than four million Egyptians poured into the streets for her funeral. Nearly a quarter century later, in recordings, her voice—so strong, she had to stand three feet from the microphone, yet so smooth it lulled babies to sleep—still ripples across the Arab world. **3,601**

848 **LORD PALMERSTON** (1784–1865)
supreme British nationalist

As foreign secretary for most of the 1830s and 1840s and prime minister, with one interruption, from 1855 to 1865, Henry John Temple, or Lord Palmerston, was the architect of the aggressive foreign policy that made Britain the dominant power of the nineteenth century. He supported the Continental revolutions of 1848, befriending Italian freedom and more or less creating Belgium. Palmerston believed the British form of government was the most per-

fect imaginable, and he declared that Britain would protect its subjects anywhere in the world, just as ancient Rome had done. To a Frenchman who declared that, were he not French, he would wish to be an Englishman, Palmerston retorted, "Were I not an Englishman, I would wish to be an Englishman." Outside of politics Palmerston indulged in the pleasures of the flesh, often scarfing down nine meat courses for dinner and bedding so many society ladies, he was known as "Lord Cupid." **3,591**

849 **ALFRED KINSEY** (1894-1956) *masseur of the sexual revolution*

In high school Kinsey was an Eagle Scout without a girlfriend. After becoming an entomologist and studying the gall wasp for twenty-five years, he switched to humans. He alone interviewed eight thousand people on their sexual habits, asking not whether but how often they did this or that. And that was the problem: His questions were loaded, and his subjects were volunteers. Thus, critics say, his findings were skewed, exaggerating the incidence of homosexuality, for example. Still, by recording people's reported sexual behavior, his best-sellers, *Sexual Behavior in the Human Male* and *Sexual Behavior in the Human Female*, opened a new era of eroticism and candor about sex. A bisexual, Professor Kinsey seduced male students and organized group sex among his staff and their spouses, filming the goings-on in the interest, presumably, of research. "If there'd never been a Kinsey," mused writer Stanley Elkin, "I'd never have seen Jacqueline Bisset's breasts" in the movies. **3,569**

850 **THE MARQUIS DE LAFAYETTE** (1757-1834) *standard-bearer of liberty*

At nineteen the French aristocrat sailed to America to fight with the Colonists against Britain. Sleeping in the frozen huts of Valley Forge and masterminding the American victory at Yorktown,

the last big battle of the war, Lafayette earned a spot second only to Washington's in the pantheon of the American Revolution's soldiers. Active also in the French Revolution, he was hailed as the "Hero of Two Worlds." Lafayette championed the rights of French Protestants, fought slavery, and advocated universal suffrage, free education, free trade, freedom of the press, and freedom for captive European nations and Latin America. Simon Bolívar called him "master." Nobody's perfect; as an old geezer, Lafayette pawed at pretty girls. But hey, he was French. The United States provided an urn of soil from Bunker Hill, mixed with the earth of France, to cover his grave. **3,535**

851 **COSIMO DE' MEDICI** (1389-1464) *patriarch of Italy's greatest family*

The Medicis ruled Florence, and later Tuscany, from 1434 until 1737, married into the royal lines of Europe (Cosimo's great-great-granddaughter became queen of France and bore three future French kings), and produced four popes, including Leo X, famous for failing to notice a German monk named Martin Luther (3). Cosimo was a Machiavellian operator before Machiavelli (40) was born. To secure power, he expelled the high-born from Florence, saying he would restore the nobility by wrapping "a few lengths of expensive cloth" around the rabble. He outwitted his opponents by guile, bribery, and when necessary, violence, once ordering an infantry captain hurled out of a palace window. A patron of the arts, Cosimo used his riches to erect magnificent monuments like the Medici palace in Florence. **3,528**

852 **CATHERINE OF ARAGON** (1485-1536) *charter member of the first wives' club*

She gave Henry VIII of England (100) the best twenty-four years of her life and six children. Then

he divorced her because her child-bearing time had ended without a male heir. Plus he was infatuated with Anne Boleyn, a giggly trophy wife. Henry's split with Catholic Catherine led to the Protestant Reformation of Britain, which makes her one-half of the millennium's most important divorcing couple—bigger than Di and Charles, Liz and Dick, even Sonny and Cher. Catherine failed to get her Catholic allies to save the marriage, and she died in a convent. Lacey Baldwin Smith, a perceptive biographer of Henry, says Catherine was lucky. If Henry had been a true Renaissance prince, he would have poisoned Catherine and saved himself and Christendom a lot of trouble. **3,507**

853 MIYAN TANSEN (1508–1590) *India's music teacher*

His name means "master who commands an army of notes," and he put Indian music on its modern course. He did it by studying thousands of overlapping ragas—the melody types at the heart of India's improvisational music—and honing the list to four hundred good ones. As a boy, Tansen could scare away trespassers by hiding in a bush and imitating a tiger. Legends say his singing was so beautiful, his voice could cause spontaneous combustion, make plants flower, and start thunderstorms. It was said that he sang a traditional nighttime raga at noon, and the sky blackened. Tansen, like Johann Sebastian Bach (35), had many sons who became noted musicians, but none approached his greatness. "For a thousand years there has not been a musician like Tansen," said the court historian of Tansen's patron, Akbar the Great (148). **3,497**

854 BRONISLAW MALINOWSKI (1884–1942) *founder of social anthropology*

The Polish-born Malinowski revolutionized the study of native cultures through his groundbreak-

ing field studies of the Trobriand Islands off New Guinea. Previous researchers might have viewed the islands' natives with cultural arrogance, as specimens "to be measured, photographed, and interviewed," wrote American anthropologist George W. Stocking, Jr. But in 1916 Malinowski pitched his tent in the village, spoke the dialect, and recorded his subjects' behavior for two years. From it came his major work, *Coral Gardens and Their Magic*. Malinowski said his theory "insists upon the principle that in every type of civilization, every custom, material object, idea and belief fulfills some vital function." His was such a new field that Malinowski, a professor at the London School of Economics, had to campaign hard for funding. He also nurtured young aspirants "for the sake of anthropology and so that they in turn may breed new anthropologists," he said. **3,481**

855 MAURICE RAVEL (1875–1937) *jazzy classicist*

If Ravel's compositions remind you of trumpeter Wynton Marsalis, it's because Ravel was one of the first composers to integrate jazz harmonies and orchestration into classical works. His masterpieces include *Daphnis and Chloé*, *Le Tombeau de Couperin*, and *Sonatine*. We had to raise Ravel's point score for a dubious accomplishment: composing *Bolero*, the millennium's most annoying classic. Boil us in oil, put us in a locked room with a life-insurance salesman—anything but the ubiquitous, pulsating *Bolero*. Ravel was a five-foot-three, book-loving dandy—one of the first Frenchmen to wear pastel shirts—and was a member of an avant-garde clique of artists called the Apaches. At the age of forty-one his fierce nationalism drove him to volunteer as a medical corpsman in World War I, though he refused to sign a manifesto calling for a ban on performances of new works by German composers. **3,476**

856 BERNARDINO RAMAZZINI (1633-1714) the doctor who warned that work can make you sick

Italian physician Ramazzini's *Diseases of Tradesmen*, published in 1700, presented the first systematic account of job-related diseases. It also marked the initial step toward enactment of factory safety and workers' compensation laws. Ramazzini cited the hazards in workers' environments and the physical toll of their labors. Goldsmiths and surgeons were exposed to harmful mercury, potters and painters to poisonous lead. Cobblers developed round shoulders, and tailors, debilitating neuritis. Ramazzini urged doctors to ask a patient "what trade he is of" to better diagnose his complaint. Associates lauded Ramazzini, a professor at the University of Modena, and later Padua, for his sweet personality, his candid judgment, and his upright intentions. In his preface to the English translation of Ramazzini's work in 1746, a Dr. James wrote that Ramazzini was created "honorary fellow of almost all academies and universities of Europe and courted by all his learned contemporaries." **3,472**

857 GEORGE GERSHWIN (1898-1937) magical music man

When Gershwin's parents bought a used piano for older brother, Ira, twelve-year-old George sat down and played a tune. His parents wisely consented to lessons. Still teenagers, George and struggling dancer Fred Astaire fantasized that someday the hoofer would star in a Gershwin musical. A decade later, Gershwin's *Lady Be Good*, featuring Astaire and his sister Adele, opened on Broadway. With hindsight, we see the niche Gershwin carved for himself in music history. His compositions bridge many forms, including classical, show tunes, and jazz. Big brother Ira penned lyrics and Gershwin wrote the music for

more than twenty Broadway musicals and movies. Memorable are "Swanee" (Al Jolson's signature song), "The Man I Love," and "I Got Rhythm." As a classical composer, Gershwin gave us *An American in Paris*, *Rhapsody in Blue*, and *Porgy and Bess*. He died at age thirty-eight following surgery for a brain tumor. **3,448**

858 FRANCISCO PIZARRO (1475-1541) conqueror of Peru

Conquistadore Pizarro battled in local wars in Spain, then fought in Italy. In 1502 he shipped out to Hispaniola (now Haiti and the Dominican Republic), where compatriots pegged him as the strong, unmotivated type. Yet by 1524 a prosperous Pizarro accompanied Balboa as he discovered the Pacific Ocean. That same year Pizarro set off in an unsuccessful search along the west coast of South America for the fabled Incan empire. A second try led him to Incan emperor Atahualpa. Claiming peaceful intent, his party took Atahualpa prisoner, then executed him. Incan resistance dissolved, and Pizarro established Lima as Peru's capital in 1535. Meanwhile, the empire's gold was pouring into Spanish coffers. Greedy and ambitious, Pizarro also could be courageous and cunning. Historian John Hemming saw him as "a magnificent leader, infinitely tenacious and determined." **3,431**

859 GEORGE GALLUP (1901-1984) opinion-poll pioneer

In a world where presidents carry poll results in their pockets to remind themselves what principles to profess, who can doubt his influence? Gallup first won fame by predicting Franklin Roosevelt's (37) victory in 1936, confounding experts who had used haphazard sampling methods instead of his scientific cross-section of the population. From the beginning, however,

polling had its detractors. "Nothing is more dangerous than to live in the temperamental atmosphere of a Gallup poll, always taking one's temperature," Winston Churchill (38) grumped. Retorted Gallup: "If government is supposed to be based on the will of the people, somebody ought to go out and find out what that will is." Gallup called himself a statistician and liked to say, "I'll give you ten to one you die of cancer, twenty to one you die of heart disease." He died of a heart attack. **3.429**

860 **BONAVENTURE** (1217-1274) *God-intoxicated saint*

Bonaventure believed he was saved from death as a boy by the divine intervention of Saint Francis of Assisi (39), and he devoted much of his life to defending the Franciscan order from its critics and internal divisions. His mystical theology had an enduring impact on Christian doctrine. His argument for the existence of God wasn't some elaborate proof but the observation that "every creature cries out that God is." He urged every man and woman to seek God through contemplation and the imitation of Christ. Though compassionate, the Italian could be ruthless in puncturing his contemporaries' pretensions. Writing on pride, he declared: "An example from the monkey: The higher it climbs, the more you see of its behind." Pope Leo XIII called Bonaventure the "prince who leads us by the hand to God." **3.419**

861 **FLORENCE KELLEY** (1859-1932) *scourge of the sweatshop*

Kelley was such a rabid lobbyist for laws to protect women and children in factories that she reluctantly withdrew support for a proposed Equal Rights Amendment. She feared it would compromise her struggle to limit women's work hours and improve the sweltering, airless, haz-

ardous conditions in America's factories. The suffragist Kelley had spent too many years as a labor activist to let a constitutional amendment destroy her life's work. Secretary of the National Consumer League, she fought for the eight-hour day and government enforcement of factory safety regulations. In fact, she was the first woman factory inspector in Illinois. Kelley scores big points with us as a prolific writer, a passionate speaker, and a most effective lobbyist against the squalor wrought by the Industrial Revolution. **3.413**

862 **ANWAR EL-SADAT** (1918-1981) *peace-loving twentieth-century pharaoh*

Sadat had a flair for the grand gesture. After taking power in Egypt in 1970, he publicly burned tape recordings made by the secret police of his predecessor, Gamel Abdel Nasser (170). In the years that followed he repudiated Nasser's one-party socialist rule by liberalizing the country's economy and lifting the government's ban on political parties. His most notable undertakings were his expulsion of Soviet military advisers in 1972, freeing Egypt from Moscow's grip; his surprise attack on Israel in 1973, restoring his nation's self-respect; and the peace treaty he signed with Israel in 1979, cooling one of the hottest threats to world peace. No saint, Sadat could be dictatorial, lazy, and acquisitive. But he also had a large heart. Thinking his assassins were putting on a special salute to him at a military parade, he broke out into his famous grin and rose to greet them. **3.407**

863 **JOHN NAPIER** (1550-1617) *inventor of the logarithm*

The logarithm is the exponent of a base number that produces a larger number; thus in $10^2 = 100$,

the 2 is the logarithm of 10. Seems simple, but it is one of the most remarkable single achievements in the history of mathematics and has saved astronomers, actuaries, and others untold billions of hours of computation. "It came to the world as a bolt from the blue," said the scholar Lord Moulton in 1914. "It stands isolated, breaking upon human thought abruptly, without borrowing from the work of other intellects." Napier was also a fanatical Protestant doomsayer who calculated that the world would end between 1688 and 1700. One of his hobbies was designing instruments of war, from burning mirrors and "devices for sayling under water" to an artillery piece capable of killing "thirty thousand Turks without the hazard of one Christian." **3,400**

864 **KARL LANDSTEINER** (1868-1943) *scientist who wrote the ABCs of blood types*

Before Landsteiner, physicians avoided surgeries that would be especially bloody; hemophiliacs always died young. After the Austrian-born Landsteiner described three major blood groups—A, B, and C—in 1901, transfusions of compatible blood from one person to another were feasible. Two colleagues later identified a fourth group—AB—and the C type was renamed O. Transfusions became widespread in 1914 after Richard Lewisohn perfected a way to preserve blood. Landsteiner's method of sorting blood types was in use throughout the twentieth century. In 1930 Landsteiner, who had become an American citizen the year before, won the Nobel Prize in medicine for his work. Then, just three years before his death, Landsteiner's collaboration with researcher A. S. Weiner led to the identification of blood's Rh factor, a crucial discovery that allowed treatment of a deadly blood disorder found in some newborns. **3,398**

865 **JOHANN PESTALOZZI** (1746-1827) *molder of modern elementary education*

Swiss reformer Pestalozzi's progressive approach to educating the young seems like A B C now: Dispense with traditional lecturing, memorization, and strict discipline and recognize children's individual differences and stages of development. He valued drawing, writing, singing, exercise, model- and map-making, and nature walks. He was the first to introduce music into the primary school curriculum. Influenced by French philosopher Jean-Jacques Rousseau (19), Pestalozzi spent thirty years promoting his own ideas (*How Gertrude Teaches Her Children* was an influential work) before putting them into practice. His break came after the French Revolution when he was asked to open a school for orphans and peasants in Yverdon. "First form the mind and then furnish it" was his motto. He worked on reasoning and logical thinking first, then reading. His spirit lives on in every grade-school classroom. **3,374**

866 **CHRISTINE DE PISAN** (1365-1429?) *feminist before it was fashionable*

This began as an entry about Novella D'Andrea, an Italian law professor who hid behind a screen so her students would not be distracted by her beauty. We unearthed a reference to D'Andrea in the French De Pisan's *The Book of the City of Ladies*, published in 1405. De Pisan convinced us that our fourteenth-century Marcia Clark was but a footnote in the millennium. (D'Andrea only occasionally substituted for her dad, the professor.) But hey, we liked De Pisan's flair. De Pisan, France's first woman author and about the earliest professional woman writer we could find, may have been the world's first feminist. When De Pisan debated military ethics in *The Book of Feats of Arms and Chivalry*, her editor made it appear to have been

written by a man. He didn't have the same qualms when she penned the oldest surviving treatise on women's rights, her *City of Ladies*. **3,361**

867 HARVEY WILEY (1844–1930) leader of the healthy food fight

Wiley, a government chemist, was troubled that formaldehyde was used to preserve milk and that copper sulfate colored canned peas. Believing that additives couldn't possibly be healthy, Wiley created a poison squad to find out. He hired strapping college graduates and fed them three square meals a day. The catch was that the food from his kitchen was laced with additives and chemicals. In exchange for food they submitted to physical examinations and collected their urine and feces for analysis. The results confirmed his suspicions. A progressive scientist in a progressive era, Wiley's work received lots of publicity and the backing of America's women's clubs, although industrial lobbies tried to sidetrack him. When President Teddy Roosevelt (700), who liked his saccharin and balked when Wiley attempted to ban it, signed the Pure Food and Drug Act in 1906, Wiley was appointed to oversee its enforcement as head of the first Food and Drug Administration. **3,359**

868 KUROSAWA AKIRA (1910–1998) Asia's greatest filmmaker

He started working in movie studios in the 1930s and directed his first feature during World War II. U.S. Army censors banned his 1945 samurai flick, *Those Who Tread on the Tiger's Tail*, because they felt it glorified Japan's military traditions; they didn't realize it was a parody. In 1950 Kurosawa made one of the most acclaimed movies ever, *Rashomon*, four versions of a single event from the perspectives of the ghost of a murdered man, his wife, a bandit, and a witness. In the artistry of the millennium, it's hard to find a

more effective depiction of the elusiveness of truth. Among the best of his three dozen movies are so-called Eastern Westerns, including *The Seven Samurai*, *Yojimbo*, and *Ran*, action movies made art by riveting characterization and photography. Kurosawa decided to kill himself after a bout with depression in 1971, but he botched the job and went back to work. **3,352**

869 ROBERT CLIVE (1725–1774) the soldier of Britain's fortune

His victories did more than anything to make India the jewel in Britain's imperial crown. The "heaven born general," as Prime Minister William Pitt the Elder (804) called Clive, thwarted the Dutch and French in southern and western India. Then, with the loss of just eighteen soldiers, he won control of East India in 1757 at the Battle of Plassey, near Calcutta. Clive started as a clerk in the British East India Company, but fighting suited him better. His decision to become a soldier was lucrative; trading in India made him a rich man. In the House of Commons in 1773 he defended himself successfully against a charge of embezzlement, complaining he was being treated like a common "sheep stealer." A year later, depressed by the pain of constant illnesses, he cut his throat and died. **3,343**

870 ANTHONY VAN DYCK (1599–1641) profound portraitist

Van Dyck was one of the most brilliant colorists in art history. He idealized his subjects while conveying their individuality, an approach that enormously influenced later artists, including Sir Joshua Reynolds and Thomas Gainsborough. After he became the renowned Rubens's (281) assistant at age eighteen, Rubens reportedly steered his young charge to portraits so he couldn't overshadow the great one at religious art. A trip

to Italy introduced Van Dyck to the Venetian masters, notably Titian, who also influenced his work. Van Dyck excelled in combining warmth with dignity as evidenced in his portrait *Maria Louisa de Tassis*. Proud and ambitious, he also was hard-working and the most prolific artist of his century; five hundred Van Dyck portraits survive. He loved luxury and entertained lavishly. As court artist for England's King Charles I, he treated patrons to elaborate meals and wine. Some say these indulgences prompted his early death. **3,325**

871 **LUIGI PIRANDELLO** (1867-1936) *playwright in search of illusion*

His invention of "the theater within the theater" had a marked influence on modern drama. Like his other works, Pirandello's world-famous 1921 play, *Six Characters in Search of an Author*, is a complex fantasy exploring the nature of illusion and reality, the permanence of art versus ever-changing life. Pirandello's characters think, debate, and try to resolve emotional problems in rational ways—an intellectual dimension Pirandello considered his true achievement, said biographer Renate Matthaei. The playwright was traumatized by his early years in Sicily's repressive and violent society. His father was a raging despot; his wife went insane and had to be institutionalized. Pirandello's output also included novels, short stories, essays, and poems. "My art is full of bitter compassion for all those who deceive themselves," he said, "but this compassion cannot fail to be followed by the ferocious derision of destiny which condemns man to deception." **3,309**

872 **JOHN DEWEY** (1859-1952) *professional educator*

He developed the chief principle of American education: Children learn best when their lessons are related to the real world. He gave rote

learning and abstract theorizing an F and taught that children must learn to think critically, using analysis and logic. Even modern educators who think children need a broad foundation of facts don't argue for a return to the pre-Dewey days when the facts had no social context. Dewey was a lecturer at the University of Chicago and Columbia University and, surprisingly, less than riveting in the classroom. "The wonder was how one who so stressed the role of interest in the educative process could himself fail so abysmally to create it in his own classes," wrote biographer George Dyukhuizen. Many people think he had something to do with the Dewey Decimal System of library classification. That was Melvil Dewey, who didn't make our list because his system is only one of many used around the world. **3,298**

873 **DOROTHEA DIX** (1802-1887) *crusader for the mentally ill*

Thanks to family and friends, the impoverished Dix gained an education and opened her own grammar school. She returned these kindnesses by dedicating her life to improving conditions for the mentally ill. In 1841 Dix taught Sunday school at the East Cambridge, Massachusetts, jail and was shocked to see the shivering mass of mental patients herded into one clammy room. Don't worry, a guard said, these people can't feel the cold. Dix toured other Massachusetts jails and recorded similar horrors. Her report to state legislators in 1843 triggered widespread reforms. Dix extended her crusade, seeing special hospitals built for mental patients in fifteen states and Canada. Except for the Civil War, when she supervised the Union's nursing staff, Dix continued her campaign until she was eighty years old. "The more I do for the mentally sick and the poor," Dix said, "the more I see to do." **3,292**

874 ALEXANDRE DUMAS (1802-1870) master of the historical melodrama

Dumas's swaggering romantic novels, *The Three Musketeers* and *The Count of Monte Cristo*, have delighted generations and been translated into almost every language. He produced four hundred books, sometimes relying on ghostwriters to maintain his output and revenue. Even so, the flamboyant Dumas was always short of cash. Known as Dumas père, he sired an illegitimate son, Alexandre Dumas, whose fame rests on the play *Camille*, the story of the tragic love affair of a consumptive courtesan. It inspired Verdi's (476) opera *La Traviata*. In old age the once exuberant and triumphant Dumas père began doubting his worth, wondering if any of his writings would survive. The son once came upon his elderly father reading *The Three Musketeers*. Dumas père explained he had promised himself to read the novel when he was old to see if it was good. "And what's your opinion?" the son asked. "It's good," Dumas answered. 3,289

875 FRANÇOIS-ANDRÉ PHILIDOR (1726-1795) the chess king

The game of kings was developed in China or India before the sixth century. But it was French opera composer Philidor who conceived of the modern game with every piece on the board—even lowly pawns—having a separate value. This unleashed upon the world a game that has challenged the intellects of millions. Philidor's gamesmanship in the Café de la Regence in Paris when he was a teenager made that city the chess center of the world. He became the greatest chess master of his time, helping to promote national schools to teach the game. His instructional book, *Analysis of Chess*, was published in 1749 and remained popular for generations. He astonished London audiences with his blindfolded exhibitions, play-

ing as many as three opponents simultaneously. When death came, however, he was alone and poverty-stricken. "On Monday last," one London newspaper intoned, "Mr. Philidor, the celebrated chess player, made his last move." 3,275

876 WILLARD LIBBY (1908-1980) atom time-keeper

When researchers pinpoint the ages of Renaissance paintings or investigate the validity of Christ's supposed burial cloth, they use techniques based on Nobel Prize-winner Libby's "atomic clock." Libby, a chemistry professor at the University of Chicago, found a way to measure tiny amounts of radioactive carbon-14, an element that all organic matter absorbs from the earth's atmosphere, then gradually loses after death. The older the object, Libby theorized, the less radioactivity it gives off. He found, for example, that the final phase of North America's ice age was ten thousand, not twenty-five thousand years ago. Libby's scientific career spanned fifty years and included work on the atomic bomb and leadership of the worldwide Atoms for Peace project. "If we treat the atom well and handle her wisely," Libby said, "the awful aspect of the warlike atom will be softened by the great power for good that she has brought us." 3,261

877 ALEXANDER MACKENZIE (1764?-1820) fur-flung traveler

He was a Scottish-born fur trader who sought a river route to the Pacific Ocean from Canada's cold heartland. That way pelts could be shipped around the world from Pacific ports. To do it, he made two of the most arduous voyages since the Odyssey. In 1789 he canoed up the river that bears his name and reached the Arctic Ocean, a frozen dead end. In 1793 he set out again, discovering the Fraser River and carving the first overland route

across the Canadian Rockies to reach the Pacific coast in British Columbia. MacKenzie's deeds may have hurt England in the long run. They frightened Anglophobic president Thomas Jefferson (64) into sending Lewis (505) and Clark to secure a U.S. foothold in the Northwest. MacKenzie was the prototypical Canadian doer—self-effacing, respectful of his inferiors, and blessed with mythic stamina. He lamented that the frenzy of his explorations left him little time to study the geography, plants, and animals along the routes. **3,256**

878 **ISAAC BASHEVIS SINGER** (1904–1991) *literary magic-maker*

The sometimes impish Singer wrote in Yiddish about the Jews of his native Poland and adopted America. His world was populated by rabbis, cobblers, housewives, lovers, and oddballs, as well as demons, witches, and ghosts. "Thousands of years of Jewish history are embedded in him," the critic Alfred Kazin said. And in the magic of Singer's storytelling, a biographer wrote, "the ice freezes harder and the sun shines hotter than in other places." When he was awarded the Nobel Prize for literature in 1978, he said, "I am sorry writers greater than I didn't get it." But told he would get \$163,000, he added, "Since it came, I will take it like a man." Asked whether he really believed in imps, Singer answered yes. But then, how could someone so full of fun and mischief say no? **3,242**

879 **JAMES I OF ENGLAND** (1566–1625) *the wisest foole in Christendome*

That appellation was meant to convey both James's erudition and his weakness of character. His reign is most famous for things that happened with scant input from him: the King James Version of the Bible; the gunpowder plot; the colonization of America; Shakespeare (5). James had the misfortune to be caught between

two of the strongest-willed women in history: his mother, Mary, Queen of Scots (610); and Elizabeth I (31), who had Mary beheaded. James's absolutism set the stage for the English Civil War, which ended in the beheading of his son, Charles I. All those beheadings! Even peace-loving James couldn't resist lopping off poor Sir Walter Raleigh's (472) noggin. But he had his P.C. moments, likening tobacco fumes to "the horrible Stygian smoke of the pit that is bottomless." He sought refuge in books, dreaming of being imprisoned in a library and "chained together with these good authors." **3,239**

880 **JUDAH HA-LEVI** (c.1075–1141) *poet of spiritual longing*

A Jewish physician in medieval Spain, Judah ha-Levi described his yearning for Jerusalem in words of haunting beauty. "When I dream of the return of thy captivity, I am a harp for thy songs," he wrote in "Ode to Zion," his most famous poem. Elsewhere, he imagined the city of David: "Beautiful height! the whole world's gladness! / O great King's city, mountain blest!" Overcome by awe of God, he proclaimed, "The endless whirl of worlds may not contain Thee." The German poet Heinrich Heine pronounced him "God-kissed." In old age Judah ha-Levi left Spain to seek the land of his ancestors but died in Egypt before he got there. Legend has it he was slain by a Muslim as he entered Jerusalem's ruins. Assessing his greatness, another medieval poet said Judah ha-Levi "broke into the treasure house of song" and, leaving, "shut the gate behind him." **3,228**

881 **PAUL KRUGER** (1825–1904) *Boer pit bull and architect of the Afrikaaner nation*

As a boy, Kruger accompanied his family on the Great Trek of the Dutch-speaking Boers into

the African interior to escape British rule. A founder of the Transvaal republic, he led the fight for independence after Britain annexed it in 1877. He became president in 1883 and governed until his flight to Europe in 1900 after the outbreak of the Boer War. An unlettered man who believed the earth was flat, Kruger exhorted his troops: "Brothers! Act with all promptness and zeal. Read Psalm thirty-three, from verse seven to the end." His sense of divine mission foreshadowed the stubbornness of the white-minority regime that ruled South Africa for most of the twentieth century. The British won the war but left in 1931. The Boers changed the course of African history, dominating southern Africa into the 1990s and still exercising immense influence.

3,217

882 THOMAS NAST (1840–1902)

*visions of Santa Claus
danced in his head*

We had considered Nast as top political cartoonist, but chose instead Honoré Daumier (587). Then a friend suggested that Nast had created the modern image of Santa. We took a second look. She was right. Although Clement Moore's 1823 poem, "'Twas The Night Before Christmas," described Santa as a jolly old elf, it wasn't until Nast began drawing for *Harper's Weekly* decades later that the chubby and plump version of Santa in a red velvet suit appeared. Nast also created the myth of Santa's workshop at the North Pole. In addition to his role as Mr. Christmas, Nast drew some of America's most defining emblems: Uncle Sam, Columbia, the Tammany tiger, the Republican elephant, and the Democratic donkey. As a political force, he was respected. Ulysses S. Grant (371) said he was elected president thanks to "the sword of Sheridan and the pencil of Thomas Nast."

3,210

883 AFONSO DE ALBUQUERQUE

(1453–1515) *the hammer that
forged Portugal's Asian empire*

On a mission for King Emmanuel in 1503, Albuquerque established the first European trading station in India and put the Arabs out of the spice business by raiding their posts. Then he added the rich cities of Calicut, Malacca, and Goa to Portugal's possessions. Albuquerque thought big when it came to destroying Muslims, whom he hated for killing his brother Martin. He mused about diverting the Nile to make Egypt a wasteland, and he killed every Muslim man, woman, and child in Goa in 1510. Yet it shows how much worse his successors were that for almost a century, Muslims and Hindus remembered Albuquerque as a man of justice and prayed at his tomb in Goa for deliverance from Portuguese cruelty. (Albuquerque, New Mexico, was named for someone else, an eighteenth-century Spanish viceroy.)

3,203

884 MARCELLO MALPIGHI (1628–1694)

physiologist with a microscope

As a teenage medical student in Bologna, he amused himself by looking in microscopes. His fun became the foundation of the study of the minute structures of animal and plant organs. He explored the secrets of the lungs and demonstrated the existence of blood circulation in the capillaries. He was the first man to describe the layers of the skin—one section is called the Malpighian layer in his honor—and he studied the nervous system and secretion glands. Just as important, Malpighi showed that examination of easier-to-study lower organisms such as silkworms and chick embryos provides lessons that could be applied to human physiology. He looked at entire bodies too; he was personal physician to Pope Innocent XII for three years.

3,198

885 JOHN MACDONALD (1815-1891)

*first prime minister
of a united Canada*

"The story of Canadian nationality seemed to write itself around him from the start," declared historian Donald Creighton. All the wily Scot's policies—western settlement, trade protectionism, transcontinental railways—were aimed at unifying his vast and underpopulated adopted country. Late in his career he fought off a movement for commercial union with the United States, saying he would oppose this "veiled treason with my utmost effort, with my latest breath." And while he was pro-British—he had even wanted to call the new confederation the Kingdom of Canada—he was determined to keep Canada out of the British imperial orbit, declaring there was no reason to send troops to the Sudan "to get Gladstone and Company out of the hole they have plunged themselves into out of their own imbecility."

3,191

886 EMMA GOLDMAN (1869-1940)

anarchist without a country

"Red Emma" was deported from the United States after she protested the draft during World War I. A rabble-rouser for years, Goldman had spent a year in prison for suggesting that the starving unemployed during the 1893 depression should steal bread. The official charge was inciting a riot. Goldman also was suspected but never charged in the 1901 assassination of President McKinley. She clashed with authorities over birth control and her support of anarchism in her magazine *Mother Earth*, which was banned in 1917. When the Russian-born Goldman was shipped back to the Soviet Union in 1919, she discovered it wasn't what she had expected. The United States refused to let her back, and Goldman died in exile. Now she's everybody's darling—she's a victim who put prin-

ciples ahead of her own comfort, or an enduring reminder of the right-wing bumper sticker:

"America: Love it or leave it."

3,184

887 ARTHUR RIMBAUD (1854-1891)

poet adventurer

Scratch the verse of many twentieth-century poets, and you'll uncover French genius Rimbaud. He introduced a revolutionary theory of poetry aimed not at pleasing or instructing but at changing life, said critic Martin Turnell. The most prized books of Rimbaud's poems: *Illuminations* and *A Season in Hell*. Many consider the poem "Le Bateau Ivre" (The Drunken Boat), his finest. It shows the stages of a man's development from restricted childhood, to free manhood, then disillusionment with liberty. Rimbaud's short, thirty-seven years were packed with creativity, travels, and dangerous liaisons. Older poet Paul Verlaine shot him in the wrist when Rimbaud ended their tempestuous affair. Verlaine got a jail term. After Rimbaud finished *A Season*, he renounced literature to spend his final years in Africa as an explorer and gunrunner. Letters show he knew of his growing celebrity at home but apparently didn't care.

3,179

888 BOB DYLAN (b. 1941)

poet laureate of the counterculture

There was folk music before Dylan lent it his raspy, nasal, and off-key voice. But after Dylan it was never the same. He gave a sound to a generation in search of something to feel bad about. First came his protest songs, "Blowin' in the Wind" and "The Times They Are A-Changin'," the anthems of 1960s restlessness. But like the decade he personified, Dylan kept shocking America, abandoning his simple folk style for hard rock in 1965, switching to blues music after a near-fatal motorcycle accident in 1966, and turning to religious themes after his conversion to Christianity in

1979. Born Robert Zimmerman, the son of a Jewish hardware-store owner in Duluth, Minnesota, Dylan reputedly adopted his new name after the poet Dylan Thomas, though some say his idol was really Matt Dillon, the sheriff of *Gunsmoke*. Joan Baez, another folk star, said of him, "He is a complicated, problematic, difficult person. I see Bobby with a slightly damaged diamond in his head." But don't think twice; it's all right. **3,172**

889 WARREN BUFFETT (b. 1930) *the investment oracle from Omaha*

More than anyone, Buffett embodies the universal human itch to get rich. And as hundreds of millions of people throughout the globe pump every spare penny, pfennig, or yen into stocks as their hope for financial salvation, Buffett stands tall—about \$15 billion tall at last count—as the man to emulate. He amassed his fortune using a method called "value investing," which he learned from a college professor. Basically it involves buying good stocks and holding on to them. "It's just so simple," Buffett said. "It's like studying for the priesthood and finding out that the Ten Commandments were all you needed." Maybe it helps to lust after lucre from the time you're a tot, like little four-year-old Warren running around the house with a money changer. Anyway, if you had invested ten thousand in his company in 1956 . . . Naw. You don't want to know. **3,169**

890 HENRI BERGSON (1859–1941) *debunker of scientific rationalism*

Bergson, an influential philosopher, acknowledged the laws of physics but denied they could reveal ultimate truth. On a walk in 1884, he had an illumination: "I saw that scientific time does not endure." Time was not a mathematical line, he concluded, but a living reality "experienced within ourselves through consciousness." In *Cre-*

ative Evolution he argued that the essential force at work in the universe was a "vital impulse." From his youth this slight, cerebral Frenchman exerted a powerful magnetism on friends. "From your whole personality emanated a singular charm," a high-school classmate told him years later in a toast. Bergson showed uncommon courage as anti-Semitism reared its head in France. A Jew drawn to Catholicism, he refused to convert because he wanted to remain with the persecuted. He died in bed before the pro-Hitler Vichy regime could get its hands on him. **3,166**

891 JOHN H. HAMMOND, JR. (1888–1965) *remote controller*

The son of a famed mining engineer, Hammond found inspiration from Daddy's friends, who included Edison (28), the Wright brothers (23, 24), Bell (74), and Marconi (95). Hammond's first successful invention was a circuit breaker that he connected to the door of his boarding school bedroom so he could circumvent the eight P.M. lights-out rule. After applying himself to more noteworthy areas, Hammond pioneered radio remote control. In 1914 he launched an unmanned yacht and sailed it 120 miles from Gloucester, Massachusetts, to Boston and back by remote control. In the eighty-some years since that first experiment, remote control has been used as a cornerstone of missile technology. More important in our day-to-day existence, it has allowed us to wallow at home as couch potatoes, "zapping" our way past dozens of television stations without touching the dial. **3,159**

892 GIUSEPPE MAZZINI (1805–1872) *Italian unification's remote controller*

We rank Mazzini, one of the founding fathers of a united Italy, behind the military hero Giuseppe

Garibaldi (368) but ahead of politician Camillo Bense-Cavour (who didn't make our list). Mazzini preached insurrection to rid Italy of foreign rulers. "Neither pope nor king. Only God and the people," he declared. Mazzini briefly organized a republic in Rome in 1848 and was instrumental in uniting Italy under King Victor Emmanuel II of Sardinia in 1861. For much of his career his detractors mocked him for fomenting rebellion from the safety of exile abroad. But British historian Thomas Carlyle (691) called him "a man of genius and virtue" and took him on walks in the English countryside to counter the effects of heavy smoking and coffee-drinking. An opponent of communism and an early advocate of women's rights, Mazzini saw "the finger of God in the pages of history." Sick of the poverty that forced him to frequent London pawnshops, he tried his hand at selling imported Genoa salami. The business failed. **3,152**

893 SAMUEL HAHNEMANN (1755-1843) *original homeopathic physician*

The German Hahnemann was so frustrated with the purging, blistering, and bloodletting routines in medicine that he abandoned his medical practice and became a translator. Then, in the midst of translating a medical text, he found a reference to the use of Peruvian bark to treat malaria. Today we know the bark contains quinine, which does indeed ease malaria's dreaded symptoms. But for Hahnemann, the reference provided the spark he needed to explore alternative treatments. He eventually concluded that natural remedies that produced symptoms similar to a disease should be used in minuscule amounts to cure illness. He used deadly belladonna to treat scarlet fever and camphor to counter cholera. They worked. Hahnemann, who documented about one hundred untraditional remedies for

diseases, dubbed his approach "homeopathy"—*homeo* for similar and *pathos* for suffering. **3,148**

894 GOLDA MEIR (1898-1978) *Israeli prime minister who extended her hand to the enemy*

When Meir died, former U.S. secretary of state Henry Kissinger said her life symbolized the "idealism that made ordinary men and women fulfill an historic vision in a barren land." Indeed, Meir had never seemed headed for greatness. Raised in Milwaukee, she emigrated to Israel in 1921, where she worked on a kibbutz and took in laundry. After a stint in local politics, Meir helped craft the Israeli state. She joked that Moses had done the Israelites dirty: "He dragged us forty years through the desert to bring us to the one place in the Middle East where there was no oil." Meir served as foreign minister, then as prime minister. But the surprise Arab attack on Israel in 1973 led to criticism of her government, and she resigned the following year. Still, she had earned her niche in history by promising that Israel would negotiate wherever the Arabs chose—a promise fulfilled months before her death when Menachem Begin and Anwar Sadat (862) shook hands. **3,126**

895 HENRY MOORE (1898-1986) *sculptor of sensuous shapes*

While other artists were blowtorching steel beams to depict the sterility of modern life, Moore was carving wood and casting bronze molds of warm curvaceous forms. His vision of art is so much more appealing. Moore said the human form mesmerized him but that he turned to the shapes of rocks, bones, and tree branches for inspiration. His massive hunks of wood, stone, marble, and bronze, all looking vaguely human and interspersed with holes and nooks,

cry out to be caressed. Like great artists before him, Moore turned again and again to the mother/child theme, but his abstract interpretations bear little resemblance to classic Renaissance madonnas. During World War II his drawings in London underground stations, then shelters from German bombs, inspired Londoners and made a name for Moore among his countrymen. Today his sculptures grace museums and outdoor parks around the world. **3,121**

896 JOHN HENRY NEWMAN (1801–1890) *Catholic prize in Protestant England*

Lifelong Catholics marvel at the fervor of converts—they're like reformed smokers in their zeal. Newman was no exception. The Anglican vicar at St. Mary's in Oxford, Newman organized and led the Oxford Movement to reform the Church of England. Followers soon suspected, however, that something was rotten in Oxford: The more Newman studied, the more fascinated he was by Catholicism. On September 18, 1843, he preached his last sermon in the Church of England and, two years later, converted to Catholicism. His poems, hymns, novels, and essays, coupled with his stature among British clergy, revived Catholicism in England. Cardinal Newman's most important work, *Apologia pro Vita Sua*, traces the journey to his conversion and establishes him as one of Catholicism's greatest thinkers. Considered an autobiographical masterpiece, the book responded to criticism by Anglican clergyman and author Charles Kingsley, who argued that Catholics were uninterested in truth. **3,099**

897 RABINDRANATH TAGORE (1861–1941) *Bengal's poetic seer*

He was the first Asian Nobel laureate for literature, and he won it in 1913 after publication of *Gitanjali*, a book of inspirational verses that

prompted his editor, William Butler Yeats (521), to write: "We are not moved because of its strangeness, but because we have met our own image." *Gitanjali* seems dated now, but the prize and praise by the likes of Ezra Pound (367) and Albert Einstein (17) made Tagore an international celebrity. He makes the list for using his fame well. He became the leading spokesman for an independent India that would include the best of both Eastern and Western cultures. For this Tagore was reviled by the uncompromisingly nationalist Mahatma Gandhi (12), but love of Western culture didn't make Tagore a toady for the British Raj. He preached anti-imperialism everywhere, including his school near Calcutta, where many of independent India's future leaders were students, including Prime Minister Indira Gandhi (791). **3,091**

898 MIKHAIL KUTUZOV (1745–1813) *Russian boot to Napoleon's butt*

The "sly old fox of the north," as Napoleon (16) called Kutuzov, understood that keeping an army intact to threaten an invader is more important than winning battles. In 1812 Kutuzov fought Napoleon to a draw at the Battle of Borodino near Moscow and then withdrew his forces. With the Russian army in the field, Napoleon could not dictate a surrender, and his retreating army lost almost 500,000 men to the Russian winter and Kutuzov's guerrillas. The defeat set the stage for Napoleon's ultimate downfall at Waterloo in 1815. Czar Alexander hated Kutuzov's drinking and womanizing, and critics accused the general of sleeping during battles. But his wisdom about when to fight and when to run prompted military strategist Karl von Clausewitz (114) to write that of those who fought Napoleon, "the prudent and wily Kutuzov was his most dangerous adversary." **3,084**

899 JACK LONDON (1876-1916)

macho writer and socialist

Before he was twenty-two, London was a seaman, seal hunter, pirate, hobo, jailbird, and Klondike gold prospector—experiences he mined for some of the millennium's most popular adventure stories. His best novels are *White Fang*, the autobiographical *Martin Eden*, and his masterpiece, *The Call of the Wild*, written from the perspective of a dog. In the years just before World War I, he was the highest-paid writer in the world, and his no-nonsense narratives about tough guys with poetic sensibilities influenced Ernest Hemingway (388), Eugene O'Neill (426), and Henry Miller. London's own favorite was *The People of the Abyss*, an account of slum-dwelling. The book aired the ardent socialism that made London so popular with the Soviet hierarchy. No American novelist's works, save Mark Twain's (188), have sold so many copies in Russian translation. Ill health and alcoholism finally dragged London down, and he died of a self-inflicted overdose of morphine.

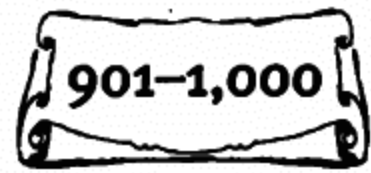
3,076

900 COLE PORTER (1892-1964)

sophisticated songwriter who got under our skin

Porter not only gave us urbane, clever lyrics, he also wrote melodies that begged to be sung, classics like "I Get a Kick Out of You," "Begin the Beguine," and "I've Got You Under My Skin." Consider the haunting "Night and Day," from his 1932 blockbuster musical *Gay Divorcee*: "Day and night, why is it so / that this longing for you follows wherever I go? / In the roaring traffic's boom / In the silence of my lonely room / I think of you night and day." Of the many shows he wrote, Porter's crowning achievement was *Kiss Me Kate*, a musical within a musical based on Shakespeare's (5) *Taming of the Shrew*. The public never knew Porter was plagued by physical problems. A horse riding accident in 1937 led to thirty-seven operations and eventual amputation of his leg. Professionally, however, he never lost his sangfroid. Composer Richard Adler called Porter "an aristocrat in everything he did and wrote. Everything had class—even a little pop song like 'Don't Fence Me In.'"

3,065



Welcome to the land of the almost-didn't-make-its. We tossed out John Kennedy but included Richard Nixon; we said no to Oprah Winfrey but gave Rosa Parks the nod; Paul Robeson is in, Mick Jagger's out. Ridiculous, you say? Don't blame us—it's the finely tuned BioGraph System that determined who's in and who's out.

There are more living people in this group than any other, and more than half these entries feature people who lived in the twentieth century. Many charted popular culture—fashion designer Coco Chanel and playboy Hugh Hefner, for example. We also pay homage to the American way of life—Coca-Cola, *USA Today*, suburban sprawl, disposable diapers, marching bands, soup cans, and *The Cat in the Hat*.

The reason so many contemporary movers and shakers are relegated to the back of the book is because the BioGraph System rewards a person's lasting influence. With the folks of our own century, it's simply impossible to gauge what their influence ultimately will be. They have had the misfortune of living at the end of the millennium. Time will determine their place in history, but not in time for this ranking.

That's why the last hundred people generated our most heated debates. Take President Kennedy, for example. He was enormously popu-

lar, even in death. But what was his lasting influence? Will he, a century from now, be considered the James Garfield of the twentieth century?

That's our bet.

Yet a folk hero like Michael Jordan makes the grade because there's no doubt he'll leave behind a tangible legacy. Jordan may hang up his Nikes, but the record book will reflect his achievements. He is the basketball player against whom all others are measured.

The 1997 death of Diana, princess of Wales, in a car accident in Paris generated an outpouring of affection and near-hysterical mourning. Does she belong on our list? Maybe the next millennium will show she was the one who sealed the fate of a dying monarchy or that her campaign against land mines ultimately forced their elimination. It's too early to tell. Look for the answers to that and other pressing questions in our sequel, scheduled for publication in the year 3000.

901 JOHN STEINBECK (1902–1968) *novelist of the little people*

Steinbeck's masterpiece, *The Grapes of Wrath*, brought the plight of Dust Bowl migrants to the nation's consciousness. The Joad family leaves drought-stricken Oklahoma and strikes out for California to find work. But promised jobs don't materialize, family members suffer even crueler times, and except for Ma, they crumble. Steinbeck knew whereof he wrote: as a youth, he was a laborer in California's Salinas Valley; during the Depression he spent months interviewing families in government camps for displaced Okies. "What he cared about was writing itself," said biographer Jackson Benson. "He wrote because he loved to write, because he was addicted to it." As the Nobel Prize-winning Steinbeck saw it, "a writer out of loneliness is trying to communicate like a distant star sending signals." **3,039**

902 FRANCES PERKINS (1882–1965) *laborer for labor*

When Franklin Roosevelt (37) was governor of New York, he appointed Perkins, a former social worker, as state industrial commissioner. She forged political connections that smoothed the path for social welfare bills. It was only fitting, then, that Roosevelt, as newly elected president, thought of Perkins for his labor secretary. She was the first woman appointed to a U.S. cabinet post, and she served eleven years. Labor leaders didn't put out the welcome mat. President William Green of the American Federation of Labor said his members could never accept Perkins as secretary of labor. But Fannie, as she was known, changed their minds. One of the staunchest New Dealers in the Roosevelt administration during the depths of the Depression, she promoted liberal labor legislation that established a minimum wage, a maximum work

week, unemployment benefits, and limits on child labor. **3,029**

903 MICHAEL JORDAN (b. 1963) *his royal Airness*

We're not going to get into an argument here about whether Jordan's the greatest athlete who ever lived (he wasn't much of a baseball player). He's simply the best basketball player. Even Isaac Newton (6) would be awed. With mouth wide open and tongue hanging out, the six-foot-nine guard regularly defied gravity. Jordan and his Chicago Bulls dominated the National Basketball Association. One of the world's most recognizable faces, Jordan made money from endorsements for sneakers, hot dogs, hamburgers, cologne, and just about anything else. Although former Celtics star Larry Bird once said, "Maybe this guy is God disguised as Michael Jordan," his destiny was not always clear. Jordan was cut from the high school team his freshman year. He made a nice splash at the University of North Carolina but only went third in the 1984 NBA draft, behind Hakeem Olajuwon and Sam Bowie. Sam who? **3,023**

904 RICHARD M. NIXON (1913–1994) *first American president to resign*

Writer Gore Vidal said Nixon was "too outsize an American figure" to be comprehended. As a boy, Nixon signed a letter to his mother, "Your good dog, RICHARD." As Ike's (374) running mate, he saved his political career by declaring his love for his dog Checkers on national TV. Defeated in bids for the White House and California governorship in the early 1960s, he snarled at reporters, "You won't have Richard Nixon to kick around anymore." Wrong. His five-year presidential record is marked by paradox. A free marketer, he imposed price controls. An anti-Communist, he opened ties to China, pursued détente with

Moscow, and ended the Vietnam War. Admired in Europe for his political acumen, he was driven from office in 1974 for covering up what he called a "two-bit burglary"—the Watergate scandal. If Tricky Dick had lived up to his nickname, he would have burned the incriminating tapes. **3,022**

905 REINHOLD NIEBUHR (1892-1971)
American politicians'
favorite theologian

Millions who have never heard of him recite his most famous prayer: "God, give us the serenity to accept what cannot be changed, the courage to change what should be changed, and the wisdom to know the difference." In the 1930s he espoused pacifism and socialism. And though he dropped both causes to advocate resistance to Hitler (20) and Stalin (82), he helped found the liberal Americans for Democratic Action. But he scorned blind faith in human progress and preached a "Christian realism" that emphasized original sin. He was also an early opponent of the Vietnam War. His most lasting impact was on the political establishment, from George Kennan, who called him the "father of us all," to Arthur Schlesinger, Jr., who said "he cast a spell on my generation," to John Kennedy. A down-to-earth preacher, Niebuhr once broke a cabinet in his dining room while wrestling a parishioner. **2,969**

906 FRIEDRICH FROEBEL (1782-1852)
cultivator of kindergarten

German educator Froebel established a school for young children in Blankenburg in 1837. He emphasized coursework, gymnastics, and handicrafts including weaving, bookbinding, and gardening. Children played with balls, blocks, paper, and sewing cards. Pretty revolutionary in a society that thought children under seven too young for schooling. Froebel realized that play—

children's natural activity—is key to learning. In *The Education of Man*, he wrote, "Play is the purest, the most spiritual, product of man at this stage, and is at once the prefiguration and imitation of the total human life." Froebel's mother died in his infancy, and his yearning for motherly love may have influenced his life's work. The Prussian government banned kindergarten as subversive in 1851—a jolt to Froebel, who died just months later. But thanks to the beneficence of a baroness, the program was spread throughout Europe and, eventually, the world. **2,950**

907 CÉSAR RITZ (1850-1918)
hotelier who personified elegance

Ritz quit his manager's job at London's Savoy Hotel in 1896 to open an elegant Parisian *auberge*, a home-away-from-home for the world's beautiful people. Ritz hired chef extraordinaire Auguste Escoffier (346) to attend to needs *gastronomique* and furnished 210 elegant rooms with enormous bathtubs, an unheard-of indulgence. His hotel was just so, well, ritzy. His name now shows up in dictionaries as a synonym for luxury. As *the* hotelier of the millennium, Ritz redefined *service* and fueled a rising consumer culture. "I know what guests want today, but what will they want tomorrow?" he mused. When the Allies stormed Paris during World War II, the hotel was personally liberated from German occupation by Ernest Hemingway (388). He sidled up to the bar that now bears his name, put down his gun, and ordered whiskey. "When I dream of an afterlife, the action always takes place in the Paris Ritz," Hemingway said. **2,948**

908 ERICH MARIA REMARQUE
(1898-1970) antiwar novelist

Remarque wrote *All Quiet on the Western Front*, the best-known depiction of World War I and

the basis for the classic 1930 film. Remarque, who was drafted into the German army, culled memories of the camaraderie of soldiers amidst the horrors of everyday warfare to write his searing novel in 1929. The narrator is eighteen-year-old Paul Baumer, a foot soldier dreaming of a better life after the war. Baumer comes to understand the absurdity of the conflict yet realizes he is trapped in it. He dies at the front "almost glad," Remarque wrote, that "the end had come." The book infuriated German right-wingers, who bristled at the novel's indictment of capitalists, politicians, and the military. Leftists criticized Remarque for his apolitical stance, saying he should have demonstrated revolutionary sentiment. Remarque was safely in exile when Hitler (20) rose to power and the Nazis burned his book. **2,927**

909 GREGORY MARTIN (c.1540–1582) English translator of the Catholic Bible

Catholic authorities discouraged lay people from reading the Scriptures but recognized that priests needed ammunition to counter Protestants versed in the Bible. In fact, when Martin's English Bible finally appeared, it was banned from alehouses and contained a warning that it should not be read by "husbandmen, artificers, apprentices, boys, girls, mistresses, maids." Martin, formerly an Oxford tutor, began his work in Reims in 1578. Translating two chapters a day, he completed the New Testament in 1582 but died before finishing the Old Testament, which was ultimately published in 1609. Martin's English version influenced the language selection in the 1611 King James Bible of the Anglican Church. Martin, who created such memorable images as the "fatted calf," was criticized for his reliance on Latin phraseology, but linguists believe his use of

Latin brought many new words into the English vocabulary. **2,911**

910 KARL BARTH (1886–1968) cathedral of Christian thought

The Swiss scholar emphasized the "wholly otherness" of God that could never be captured in rationalism. "God is God and altogether different from all things human, even from human religion," declared the pipe-smoking aficionado of Mozart (52), mountain climbing, and mystery novels. The ultimate reality, he said, was neither science nor religion but two words, "Jesus Christ," because in Christ, God fastened himself to humanity forever. To be sure, we oversimplify his thirteen-thousand-page *Church Dogmatics*, which one admirer called a "veritable cathedral of Christian thought." Active in the Confessional Church, which opposed Nazism, Barth was bounced from the University of Bonn for refusing to take an oath of allegiance to Hitler (20). In his later years the theologian preached in the Basel prison as a "prisoner among prisoners." Alas, he had a blind spot, calling anticommunism "a greater evil than communism itself." **2,901**

911 WILLIAM JENNINGS BRYAN (1860–1925) king of the also-rans

At age thirty-six Bryan electrified the Democratic National Convention with one of the most famous sound bites in American history, a dig at eastern bankers: "You shall not crucify mankind upon a cross of gold." Men wept; women screamed; the standing ovation lasted one hour. Nominated for president, Bryan ran on a populist platform, but his rural supporters' hero worship couldn't overcome Republican money. The Boy Orator lost—and lost again in 1900 and again in 1908. Though despised by liberals for siding with the prosecution in the Scopes trial of

a schoolteacher accused of teaching evolution, Bryan was instrumental in the adoption of liberal reforms, from the popular election of senators to woman suffrage. Columnist H. L. Mencken mocked him as the leader of "anthropoid rabble," but poet Vachel Lindsay adored him as "that Heaven-born Bryan, that Homer Bryan, who sang from the West." **2,867**

912 NOAM CHOMSKY (b. 1928) *American linguist*

Chomsky's theory of generative grammar, which states that the logic behind all the world's languages is wired into the human brain at birth, revolutionized his field. In essence, he is saying that children raised in the wild by wolves would develop their own language. Linguists refer to the publication of his *Syntactic Structures*, the book that lays down his arguments, as "the Event." Don't try reading it though; as one critic pointed out, for someone claiming that language is instinctive, his own use of it can get pretty convoluted. Chomsky gained even greater, if ephemeral, fame in the 1960s and 1970s as an *éminence grise* of the New Left, railing against the evil American empire and declaring that Presidents Kennedy, Johnson, Nixon (904), and Ford were all "guilty of racist murder on a scale undreamed of" by African tyrant Idi Amin. **2,856**

913 HANNAH ARENDT (1906-1975) *chronicler of evil*

Arendt's 1951 book, *Origins of Totalitarianism*, made her famous. But she earns a place in this book for her controversial work, *Eichmann in Jerusalem*. In it, she chronicles Israel's 1961 trial of Adolf Eichmann, the middle-class bureaucrat who perfunctorily carried out Hitler's "final solution of the Jewish problem"—mass deportations and executions. Yet Arendt, who was Jewish, saw Eich-

mann not as a "monster" but as a symbol of "the banality of evil," the chilling phrase she coined to characterize everyone's potential for committing heinous acts in an atmosphere of normalcy. In 1933 the rising wave of Nazism prompted Arendt to flee her native Germany for Paris. She married, emigrated to the United States, and was soon recognized as an authority on anti-Semitism. Recent developments, however, have called her judgment into question. Arendt's letters to German philosopher Martin Heidegger (914) reveal their prewar affair and lingering attachment. Trouble is, Heidegger was a Nazi sympathizer. **2,839**

914 MARTIN HEIDEGGER (1889-1976) *evil genius*

We are tempted to assess the German philosopher's influence and note, as an afterthought, the paradox of his support for Hitler (20) and lifelong friendship with the Jewish scholar of the Holocaust Hannah Arendt (913), whom he seduced when she was a teenager. But Heidegger's real importance is the warning he sends posterity to beware of intellectuals espousing higher forms of truth. He probed the nature of Being in obfuscatory language (Example: "Whatness, as the being of the essent, becomes that which is most beingful in an essent"), but the French savants Sartre, Marcuse, and company lapped up his existentialist drivel while Americans like self-help guru Werner Erhard made money from it. Alas, this lover of truth loved Hitler more, calling him "the German reality, present and future." After the war Arendt excused Heidegger's behavior as the "delusion of genius." **2,835**

915 FRANKLIN KAMENY (b. 1925) *activist who brought gays out of the closet*

Kameny, an astronomer with a doctorate from Harvard, was fired in 1957 from his job with the

U.S. Army Map Service because he was homosexual. He tried to sue the government, but his case was thrown out. Even the Supreme Court refused to hear his appeal. Dejected, Kameny organized a chapter of Mattachine, a gay support group, in Washington, D.C. Instead of secret meetings to help members cope with their ostracism, however, Kameny's chapter went public. On July 4, 1964, he led a march on Philadelphia's Independence Hall. Borrowing from the civil rights movement, Kameny organized other public demonstrations and an exhaustive letter-writing campaign to government officials. His protests forced the American people to finally confront publicly the issue of government-sanctioned discrimination against homosexuals. Kameny claimed victory in 1975 when the federal government abandoned its ban on homosexuals in civil service jobs. **2,828**

916 **FRANK GILBRETH** (1868–1924) *original type A personality*

Time is money; faster is better; it's cheaper by the dozen, et cetera, et cetera. Gilbreth made a career out of saving time and money. His studies eliminated unnecessary motion to increase industrial output. He was so consumed with efficiency that he lathered his face with two brushes to shave seventeen seconds off his morning ablutions. He tried using two razors, but the time saved was lost in the extra minutes it took to stop the bleeding. Working with his wife, Lillian, the "first lady of engineering" who taught at several universities, Gilbreth filmed a task to eliminate needless motions. For example, bricklayers who adopted his methods more than doubled their productivity. A generation after the death of this intellectual bedfellow of Frederick Taylor (414), two of Gilbreth's children memorialized his boisterous personality, eccentricities, and sometimes

comical attempts to apply his theories to his household of twelve children in the bestseller *Cheaper by the Dozen*. **2,794**

917 **WALTER HUNT** (1796–1859) *pinhead*

If this New Yorker's marketing and production skills had been half as good as his tinkering, Hunt sewing machines and Hunt fountain pens would be famous brands, and the Hunt repeating rifle would have won the West. He made early models of all those inventions only to see Singer, Parker, and Colt become rich and famous by building on his work. He invented the paper collar—a winning item when men could afford only one or two shirts—but died before it became popular. Hunt makes this list for an invention that was never bettered, the safety pin: a single loop of wire with a spring at one end and a clasp at the other. It took him only three hours to make the first pin. He obtained U.S. Patent No. 6281 for it on April 10, 1849, and then he sold the manufacturing rights for pin money: \$400. **2,773**

918 **JOSEPH GOEBBELS** (1897–1945) *Nazi propagandist*

As the ad exec in charge of the Hitler (20) account, Goebbels showed it was possible to sell anything, even garbage. He sank to the task with gusto, earning a niche in the evildoers' hall of infamy. His newspaper, *The Attack*, railed against Jews, Communists, and democrats, and as propaganda director, he legitimized Hitler in 1930 by whipping up votes that increased the Nazi Party's strength in the Reichstag from 12 delegates to 107. He had a doctorate in literature, which made him queasy about book burning, but he got over it. The clubfooted, cadaverous, dark-haired, squeaky-voiced Goebbels was no model Aryan type, and in the end he was self-delusional. Two

days before Goebbels and his wife poisoned their six children and themselves in a Berlin bunker as the enemy closed in, he still believed he could negotiate an end to World War II. **2,761**

919 WILLIAM COBBETT (1763-1835) *porcupine with a pen*

Cobbett liked to make sharp observations and toss pointed barbs in his *Porcupine's Gazette* newspaper. Nearly a century before muckrakers exposed social and political ills, Cobbett suggested reforms and stirred up trouble in print. He quit the British Army to avoid punishment for accusing his superiors of incompetence, and he took up journalism in America. But he ruined his welcome with articles denouncing just about everybody. He aired suggestions that George Washington (22) overdraw his salary and lent the excess at usurious rates. He said of James Madison (268), "his countenance has that sour aspect." With deportation for libel imminent, Cobbett went home to England to denounce Jews, German mercenaries, capitalists, and whatever government happened to be in power. Before Dickens (70), he railed against the crushing inhumanity of the Industrial Revolution. He supported his arguments with statistics, and his writings were so popular he was elected to the House of Commons. At last he had immunity to say what he wanted without fear of prosecution. **2,719**

920 GIROLAMO FRACASTORO (1478-1553) *medicinal poet*

Venereal disease and verse? An unlikely pairing. But writer Fracastoro mated them seamlessly in his narrative poem, *Syphilis sive morbus Gallicus*. Translation: *Syphilis or the French Disease*. It presented a primitive germ theory three centuries before either Pasteur (26) or Koch (211). In thirteen hundred Latin verses filling three books,

physician Fracastoro told the mythological tale of Sifilo. Angry at Sifilo's licentiousness, the Sun God had zapped the shepherd with a disease that spawned an ulcer on his body. The poem mentions cures, including sap of the guaiacum tree and mercury. The books were blockbusters. Many say syphilis derived its name from the shepherd-character. Two years after Fracastoro's death, the Veronese erected a statue in his honor near the marble likenesses of Pliny and Catullus, two other literary luminaries, but of ancient times. **2,708**

921 SRI RAMANA MAHARISHI (1879-1950) *guru of all gurus*

At the age of seventeen he realized that the self had no relationship to the body; self was unlimited, universal, and beyond space and time. He went to the holy city of Aranchala in southern India, threw away money and clothes (except a wrap for his loins), and never left. Word of his holiness spread, and the world flocked to him for spiritual advice. In 1911, his first European acolyte, F. H. Humphries, described Maharishi as "a sitting motionless corpse from which God was radiating terrifically." Maharishi taught: "If one realizes within the heart what one's true nature is, one will find that it is infinite wisdom, truth, and bliss, without beginning or end." As the leading Hindu saint of modern times, he did much to spread the notion that when it comes to religious truth, less is more. **2,697**

922 PAUL ROBESON (1898-1976) *America's deep voice of drama and dissent*

As an actor, Robeson won acclaim in Eugene O'Neill's (426) *The Emperor Jones* and in Shakespeare's (5) *Othello*. His powerful bass voice brought him roles on the musical stage as well.

His rendition of the classic "Ol' Man River," from *Showboat*, made the song one with his name. As his career advanced, he also gained prominence for his recordings of black spirituals and working-class folk songs. The performing arts got Robeson on the rebound. This two-time all-American football player at Rutgers University graduated Phi Beta Kappa from Columbia University Law School in 1923. Seeing few job opportunities for black attorneys, he tried the stage and liked it. Robeson was also a concert singer, linguist, writer, and human rights activist. But his open admiration for Soviet Communism was condemned by the House Un-American Activities Committee, and he was blacklisted by Hollywood and Broadway producers. In death, his reputation as a performer and an advocate of social justice has widened like Ol' Man River at flood time. **2,680**

923 GROTE REBER (b. 1911) *charter of cosmic radio waves*

Reber, an American electronics engineer, opened another door to the universe with his work in radio astronomy. He built the world's first radio telescope in his Illinois backyard in 1937. The bowl-shaped reflector, more than nine meters in diameter, sported an antenna. Neighbors must have rolled their eyes when Reber said this gizmo could "hear" extraterrestrial noises. But Reber knew something they didn't: Almost all objects in space transmit radio radiation, with pulsars, nebulas, and quasars topping the list. Reber found bursts of radio waves coming from constellations in the Milky Way. His telescope told him only the general direction of emissions. Later, sophisticated models interpreted the waves and identified the chemical composition of the pulsating body. Reber devoted the rest of his career to compiling a map of the sky, based on

findings from more sensitive radio telescopes in Hawaii and Australia. **2,657**

924 JOHN PHILIP SOUSA (1854-1932) *the March King*

Sousa raised the standards for performance and instrumentation in concert bands. He earned his royal title for composing 140 rousing, distinctly American military marches including "Semper Fidelis," the official march of the U.S. Marine Corps. But none of them electrifies like "Stars and Stripes Forever." He refused credit for his creativity: "All of my music, all of my melodies are not of my making; no matter how light, they came from a higher source." Legendary conductor Leopold Stokowski loved him, saying, "The music swept me off my feet. The rhythm of Sousa stirred me, for it was unique." Sousa enlisted as an apprentice in the Marine Corps band at age fourteen. Twelve years later he became its conductor and molded the band to world-class status. A good march, Sousa always maintained, "should make a man with a wooden leg step out." **2,611**

925 ANTONIO DE MENDOZA (1490-1552) *New World defender of the downtrodden*

Mendoza, first viceroy of New Spain, wanted the Indians freed from slavery in 1542. But bondage continued another 178 years. As the Spanish king's personal representative in Mexico, Mendoza was an able bureaucrat who collected revenues honestly and presided over Indian affairs with compassion. He supported the king's New Laws in 1542 to limit royal land grants over the Indians but soon recognized they were unenforceable. Spanish landowners in Mexico had issued a collective howl, and the mother country buckled. Still, Mendoza got reduced hours for Indian mine workers and saw that free Indians

got paid. "In the midst of all the fiery and unregulated spirit of a colony like Mexico, he sustained the dignity of his office unimpaired," wrote historian Brantz Mayer. "History must at least do him the justice to record the fact that his administration was tempered with mercy." **2,589**

926 **JEAN-AUGUSTE-DOMINIQUE INGRES**
(1780-1867) *grand old man*
of French painting

Talk about hills and valleys—Ingres knew the landscape. He was a dominant figure in French painting for most of the nineteenth century and was the leading figure in the neoclassical school. Sure of his talents, he was often dismayed by critics' assessments. A student of Jacques-Louis David, Ingres continued his master's cool, carefully balanced style and won early acclaim. In 1806, however, his paintings were badly hung in a major exhibit, and critics panned them. In 1811 his *Jupiter and Thetis* got blasted by the Académie des Beaux-Arts. Three years after, the wondrous *Grande Odalisque*—the nude turbaned bather with the three extra vertebrae in her never-ending back—met the same reception. No wonder Ingres was worried about the reaction to his *Vow of Louis XIII* in 1824. But Parisians loved it. Charles X, no less, presented Ingres with the Cross of the Legion of Honor. Go figure. **2,576**

927 **SAMUEL BECKETT** (1906-1989)
leading dramatist of
the theater of the absurd

This modern school of drama is all about alienation and noncommunication. Beckett's best-known achievement in this genre, the existential play *Waiting for Godot*, treats the hopelessness of the human condition with comic flair. In *Godot* the two heroes find themselves existing in the world while not knowing the purpose of that

existence. They reason that they are there to wait for someone named Godot, not knowing if he will ever show or if he even exists. To the Irish-born Beckett, his heroes "seem to be falling to bits." Although Beckett often was identified with the powerless and feeble characters he created, he actually was tough, strong, and decisive. He won the Nobel Prize for literature in 1969, but shy and fiercely private, he shunned the award ceremonies in Stockholm. **2,565**

928 **PETER BEHRENS** (1868-1940)
master artist of the mundane

Modern consumers expect efficiency and good looks from the mass-produced products they buy. That makes every lamp, saucepan, and appliance the inspiration of an industrial designer. In the first wave of these designers, the German Behrens stands out. He was a mediocre artist dabbling in woodcuts, paintings, and ceramics when he was tapped in 1907 to be artistic adviser at Allgemeine Elektrizitäts-Gesellschaft, one of the world's largest manufacturing companies. He attracted top-notch students including Mies van der Rohe (364) and Le Corbusier (155). As a change from the curves and flourishes of art nouveau, Behrens displayed a simple, effective style with clear lines—like what we know today. One example: his electric kettle of 1908. But he's better known for his factory designs. Behrens built the company's factory complex and, later, its turbine assembly works with a glass wall. A little on the heavy side, but pleasing nonetheless. **2,563**

929 **FEDERICO GARCÍA LORCA** (1898-1936)
most popular modern poet
of the Spanish-speaking world

Lorca's melancholy verse often dealt with death, love, lust, and violence. His greatest poem, the

elegy *Lament for Ignacio Mejías*, commemorates a bullfighter fatally gored in 1934:

At five in the afternoon.

It was exactly five in the afternoon.

A boy brought the white sheet

at five in the afternoon.

A frail of lime ready prepared

at five in the afternoon.

The rest was death, and death alone

at five in the afternoon.

Lorca preferred to read his works at public gatherings before publishing them. "Verse is made to be recited," he declared. "In a book it is dead." His own death came at the hands of Nationalists during the Spanish Civil War. But they couldn't kill his poetry. His verses, Lorca once said, were "a conscious rocket of dark light let off among the dull and torpid." **2,521**

930 JANE CUNNINGHAM CROLY (1828–1901) popularizer of women's clubs

Croly was a well-known newspaper and magazine columnist when she tried to buy a ticket to hear Charles Dickens (70) speak at the New York Press Club. The club members laughed. She didn't get mad, she got even. In November 1868 she and her literary friends formed their own club, Sorosis. This previously unheard-of activity for respectable women was scorned by New York newspapers, which poked fun at the women in columns and cartoons. No matter. In a time when suffrage seemed radical, women's clubs provided their members with a less controversial way to involve themselves in public life. Croly's idea blossomed. Millions of women joined clubs that sprang up on the frontier, in farmlands, and in urban centers around the world. By 1900 most women's clubs were deeply involved in civic reform, fostering the kindergarten movement, creating thousands of parks, and funding public libraries. **2,499**

931 FRANÇOIS TRUFFAUT (1932–1984)
crest of the New Wave directors

French directors who emerged after World War II dubbed themselves auteurs. They considered themselves—not the actors, writers, or producers—the creators of what appeared on the screen. Truffaut was in the forefront, making movies such as *Jules and Jim*, about the conflicts of a love triangle, and the autobiographical *400 Blows*, with its sympathetic treatment of adolescence. Except for a few deviations, like the sci-fi flick *Fahrenheit 451*, Truffaut's films are awash with gentleness, irony, and a youthful exuberance. "The characters in a film interest me more than the story," Truffaut said. "I enjoy unexpected details, things that prove nothing, things that show how vulnerable men are." Truffaut's love of film began in his troubled childhood. Neglected by his parents, he skipped school to take classes at the local cinema. "Movies acted on me like a drug," he said. "I felt a tremendous need to enter into the films." **2,471**

932 ROBERT PEEL (1788–1850)
law and order innovator

Peel served as British prime minister for six turbulent years and was founder of England's Conservative Party. But we showcase him here for his stalwart contribution to the millennium: the Metropolitan Police Act of 1829. This law established the first disciplined police force for greater London, which became a model for crime-stoppers everywhere. Naturally these officers were dubbed "Bobby's boys," soon shortened to "bobbies." Over the years, they've earned a high level of public admiration for their no-nonsense, coolly polite, and civilized demeanor. And until recently they had to capture the bad guys without firepower, too. While Peel's crime-prevention policies were popular, his 1846 repeal of the Corn

Laws, which had restricted imports, led to his downfall. To political foe Benjamin Disraeli, Peel was "a burglar of others' intellect. There is no statesman who has committed political petty larceny on so great a scale." **2,453**

933 **STEPHEN BIKO** (1946-1977) *martyr for the anti-apartheid cause*

The founder of South Africa's Black Consciousness movement, Biko was jailed for illegal activities. Inside prison he and an accomplice ripped apart a paper outlining their plans and ate it—his "last supper." Biko's captors kept him naked in his cell for eighteen days, deprived him of food and water, beat him, and when he began foaming at the mouth, drove him seven hundred miles to another cell and left him to die. They later claimed he killed himself by banging his head against a wall. The murder galvanized opposition to apartheid, leading to American sanctions and hastening the fall of the white supremacist regime. Four months after Biko's death, his lover bore him a son, whom she named Hlumelo, "the shoot growing from a dead tree trunk." **2,410**

934 **MARCEL MARCEAU** (b. 1923) *Frenchman who said everything by saying nothing*

If a mime falls in a forest, does he make a sound? Not Marcel Marceau, whose performances, both live and cinematic, made the ancient practice of silent communication by body movements a staple of modern popular culture. At the age of five he fell in love with pantomime while watching a Charlie Chaplin (795) movie, and after World War II he studied with Étienne Decroux, a guru of French mimes. In 1947 the five-foot-nine Marceau invented Bip, the white-faced, mop-haired, rubber-bodied character who has become

synonymous with miming. Marceau was not an imitator, he was an actor-artist. And he has not been mum about his craft. "The actor mime vibrates like the strings of a harp," he said. "He is lyrical: his gesture seems to be invested with a poetic halo." **2,379**

935 **GEORGE MALLORY** (1886-1924) *summit seeker*

The English mountaineer was last seen heading into a cloud eight hundred feet below the summit of Mount Everest, and we like to think he got to the top. The most famous mountain climber of his generation was a literature teacher with courage, charm, and the wiry strength of those men who demonstrate fitness machines on television. His niche in history is secured by his existential quote about why he wanted to climb a mountain: "Because it is there." For most of the millennium, dying heroically was something done on battlefields. But modern war is impersonal, mechanical, and—let's face it—*outré*. Mallory and his followers—like Edmund Hillary and Tenzing Norkay, who conquered Everest in 1953—achieved glory by doing something dangerously unnecessary. Nowadays technology makes such feats easier. All Mallory had was a balky oxygen rig and a stiff upper lip. **2,333**

936 **HENRY CLAY** (1777-1852) *America's Great Compromiser*

One Georgia congressman refused to be introduced to Clay for fear of falling prey to the Kentucky politician's famous charm. Clay, like Lincoln, viewed preservation of the Union as the highest good. "Secession is treason," he declared. As the spirit of rebellion spread in the South, he sought to legislate compromise between slave and free states—a task political analyst George Will likened to lassoing a locomotive with cob-

webs. But agreements he hammered out in 1820, 1833, and 1850 delayed the Civil War by a decade at least, saving the nation by giving the North time to grow strong enough to crush the Confederacy. Famed for his oratory, Clay stumbled once, forgetting his Shakespeare (5) and declaring, "A rose will smell the same, call it what you will." He prayed to God that if the South seceded, "I shall not survive to behold the heart-rending spectacle." His prayer was answered. **2,319**

937 **HUGH HEFNER** (b. 1926) *sexual revolutionary*

He was a twentieth-century everyman; a child of prudish parents trapped in a loveless marriage and a dead-end job that had no moral purpose: writing ad copy. In 1953, with \$10,000 in borrowed money and pictures of a naked Marilyn Monroe for his first issue, Hefner invented *Playboy* magazine, a glossy glorification of consumerism, good literature, and uninhibited sex. "It was like a mission—to publish a magazine that would thumb its nose at all the restrictions that had bound me," he told an interviewer in 1961. Hate them if you must, but Hefner's centerfolds and libidinous philosophy did much to loosen the grip of Judeo-Christian guilt on sexuality and legitimize our R-rated and X-rated popular culture. Beneath his celebrity Hefner was a boring, reclusive workaholic. And AIDS eventually made the world realize that sex can be deadly. **2,307**

938 **PANCHO VILLA** (1878–1923) *one mean revolutionary*

As a youth, Doroteo Arango (his real name) became a fugitive and eventually a bandit after murdering the ranch owner who assaulted his sister. A natural leader and military strategist, Villa gathered a division of soldiers and joined rebel forces fighting the regimes of Porfirio Díaz and

Victoriano Huerta. When the United States threw its support to a revolutionary rival, the cruel and volatile Villa retaliated by killing Americans in a raid on Columbus, New Mexico, in 1916. President Woodrow Wilson dispatched an army expedition into Mexico but failed to capture this loose cannon. Years later Villa was living the life of a cattle baron in northern Mexico when vengeful peasants gunned him down. He soon became the stuff of legends and, nearly fifty years later, won Mexicans' recognition as a "Hero of the Revolution." **2,253**

939 **IBN BATTUTAH** (1304–1378) *traveling man*

If they had frequent walker miles then, Ibn Battuta would have won a free trip anywhere in continental Asia. He wandered 75,000 miles around the medieval world, and his memoirs have been a source of knowledge of flyblown kingdoms from Castile to Canton, from Turkey to Timbuktu. Motivated by nothing more than restlessness, Ibn Battutah crisscrossed the Arab world, visited the Crimea's Christian settlements, which he hated—too much bell-ringing—spent eight years in the employ of the cruel Indian dictator Muhammad ibn Tughluq, decamped for Ceylon, Sumatra, and China, returned to the Middle East, and made a two-year trip to central Africa before settling in his native Tangier. After a life on the road, he wrote, there's no place like home. **2,169**

940 **MATA HARI** (1876–1917) *the spy who loved everyone*

We doubt there's an ounce of truth to any of this, but like spies, we're not above passing on what we heard. One legend has it that when six French officers arrested Mata Hari, she greeted them at the door in the buff and tried to lure

them en masse into her bed. Another story says the firing squad shot blank cartridges and that, like Elvis, Mata Hari lived to love again. We had to include exotic dancer Margaretha Geertruida Zelle Macleod because her story has sparked so many legends and her name is synonymous with espionage. She wasn't the best spy (after all, she got caught), but she's certainly the most famous. We'll never know whether she really spied for the Germans during World War I. Perhaps the French officers she seduced just wanted her silenced. But to the best of our knowledge, there were real bullets in the rifles. **2,144**

941 CHE GUEVARA (1928-1967) *guerrilla folk hero*

Guevara's bearded image peers out from millions of T-shirts and posters. He was Fidel Castro's (466) right-hand man during the Cuban Revolution and later the organizer of guerrilla forces in Africa and South America. Born Ernesto Guevara de la Serna to a prosperous, left-leaning family in Argentina, he was plagued by asthma. Although Guevara earned a medical degree, he never practiced medicine and instead dedicated himself to violent struggle to free South American peasants from poverty. But his military blunders nearly destroyed Cuban revolutionary forces in 1953. Eventually Guevara grew disillusioned with Cuba's bureaucracy and left the country. "I leave behind the purest of my hopes as a builder," he wrote Castro. Two years later Guevara resurfaced as a guerrilla in Bolivia, where he failed to gain local Indians' support. His execution by government troops made him a cult hero. **2,143**

942 ANDRE MALRAUX (1901-1976) *highbrow Indiana Jones*

A brilliant French writer, Malraux was also one of his century's most flamboyant adventurers. In

1923 he was jailed for trying to steal sculptures from a temple in the Cambodian jungle. As a young Marxist, he organized a revolutionary group in Indochina and fought in the Spanish Civil War, and as a Resistance fighter against the Germans, he was captured and forced to undergo a mock execution. He abandoned communism for Charles de Gaulle and served as France's minister of cultural affairs. His greatest novels, *Man's Fate* and *Man's Hope*, portray revolutionary struggles as tragic but noble battles against the absurdity of the universe. Malraux never talked about the absurdities of his own life—the death of his wife, the death of his two sons in a car accident—but in the sickness of old age he wrote of "seeing the warm face of death." **2,140**

943 MAXIMILIAN I (1459-1519) *Charlemagne wannabe*

Maximilian, archduke of Austria, German king, and Holy Roman emperor, didn't lack titles. Nor did he lack military skill or diplomatic brilliance, with the result that he assured his family, the Habsburgs, a dominant position in Europe for four centuries. Alas, his achievements fell short of his romantic vision of himself as the Renaissance successor to Caesar and Charlemagne, the two great unifiers of Western Europe. He was a bit of a nut, believing himself to be the reincarnation of King Arthur and the descendant of Hercules and the ancient Egyptian god Osiris. He loved chivalry and tournaments and called himself the "last of the Knights." That said, he added vast territories to the Habsburg realm through marriage, military conquest, and treaty, including Burgundy, the Netherlands, Hungary, Bohemia, and the crown jewel—Spain and its empire. For which his successors doubtless said: Thanks a million, Maximilian. **2,137**

944 ROSA PARKS (b. 1913) *American refusenik*

Jim Crow segregation was the law in the South. Rosa Parks was a black seamstress in Montgomery, Alabama. It was no contest. She was tired that afternoon of December 1, 1955, when she was ordered to surrender her bus seat to a white passenger, so she just said no—and the civil rights protest movement was born. Her arrest triggered a boycott against the bus company and the intervention of a young pastor named Martin Luther King, Jr. (56), who declared, “We have no alternative but to protest.” The boycott led to sit-ins, freedom rides, voter registration drives, violent clashes, and the Voting Rights Act of 1965. In 1994, Parks was robbed and beaten by a black man in her home. “Many gains have been made,” she said afterward through swollen lips. “But we still have a long way to go, and so many of our children are going astray.” **2,133**

945 SIMON WIESENTHAL (b. 1908) *Nazi hunter*

To measure his impact requires an act of the imagination: What future Holocausts has he prevented by keeping alive the memory of the Nazi horror? Founder of the Jewish Documentation Center in Vienna, Wiesenthal tracked down more than one thousand war criminals, including Adolf Eichmann, the chief executioner of European Jewry. Viewing the archdemon for the first time, he recalled, “I saw a frail, nondescript, shabby fellow. He looked like a bookkeeper who is afraid to ask for a raise.” Wiesenthal could have emigrated to America and, with his brains, made a bundle, but he chased Nazis instead because “I have to do it. We must not forget.” He was the doer; fellow concentration-camp survivor Elie Wiesel was the thinker. Wiesel didn’t make our list, but we pay tribute here to the

author of *And the World Remained Silent* and other novels that chronicle twentieth-century man’s descent into evil. **2,129**

946 BENJAMIN LEE GUINNESS (1798–1868) *stout-hearted brewer*

The Guinness Book of Records notes that beer was around before this millennium, but the oldest brewer is Germany’s Weihenstephan Brewery, founded in 1040, and the biggest is Anheuser-Busch, which averaged about 2.7 billion gallons annually in the 1990s. So why Guinness? Without doubt he’s the world’s most famous brewer, who made Irish stout an international favorite. In 1825 Guinness took over his father’s small brewery and expanded it to become one of the largest in the world. He had his stout named the national drink of Ireland. His beers commanded such respect that in 1851 he was elected lord mayor of Dublin and later served in Parliament. Today dark, creamy Guinness Stout is sold in more than 120 countries. The book of superlatives that bears the Guinness name was first sold by the company in 1955 to resolve arguments started by blarney served up in pubs around the world. **2,122**

947 JOSEF PILSUDSKI (1867–1935) *liberator of Poland*

Pilsudski was a master of the grand gesture. Imprisoned by Poland’s Russian masters in 1900, he feigned insanity and escaped. Eight years later he and his confederates robbed a train and used the loot to start a militia. In 1918 he made a triumphal entry into Warsaw from a German jail and became Poland’s first modern president. In 1923 he resigned, but three years later he marched on Warsaw and seized power again. Through it all he broke the Russian yoke, helped unite Poland, and showed how a small country

caught between geopolitical giants can survive. "To be vanquished and not surrender—that is victory," he said. In a crisis he would imagine what his mother would want him to do. "As long as I can feel that I have done right in her eyes," he said, "I do not care if the whole world is against me."

2,116

948 MATTHEW ARNOLD (1822–1888)

gloomy poet, optimistic thinker

His disciplined verse presaged twentieth-century poets' pessimism. In "Dover Beach," he wrote, "the world, which seems to lie before us like a land of dreams, so various, so beautiful, so new, hath really neither joy, nor love, nor light." Who could blame him for being depressed? For thirty-five years, as a school inspector, Arnold checked ventilation and privies and administered tests to thousands of pupils and teachers each year. In one marathon day he gave oral exams in algebra, literature, the Bible, surveying, and grammar to 309 student teachers. The tedium eventually drove the poetry out of him, but his prose was fine. In *Culture and Anarchy* he called for intellectual excellence unfettered by politics and philistinism. He died of a heart attack a few days after jumping over a fence on a dare—a dumb stunt for a sixty-five-year-old man weighing 268 pounds.

2,100

949 TERESA OF ÁVILA (1515–1582)

religious reformer

She is one of the Catholic Church's most important saints and the first woman doctor of the church. Born to Castilian aristocracy, young Teresa ran away from home, pining for Christian martyrdom in Morocco. Then at age twenty she defied her father and entered a Carmelite convent. However, that life proved too comfortable for Teresa, who practiced mental prayer and

avored solitude, hardship, and poverty. In 1562, despite societal and church opposition, she founded a new house called St. Joseph of Ávila, where nuns wore coarse brown habits and sandals, ate no meat, and performed manual labor. She established sixteen more convents and, for each, sought candidates of intelligence and good judgment. "God preserve us from stupid nuns!" she once exclaimed. The religious fervor she stirred extended beyond Spain and was a main impetus in the Counter-Reformation. Her writing, *Life and the Way of Perfection*, is among the greatest in mystical literature.

2,038

950 KHALIL GIBRAN (1883–1931)

a prophet for a mass culture

The Lebanese Gibran's most famous book, *The Prophet*, turns up in every bookstore. That's because the Christian poet's philosophical bent, fusing Eastern and Western mysticism, appeals to so many. "While I was writing *The Prophet*," Gibran said, "*The Prophet* was writing me." Consider these passages from this 1923 book: "Your daily life is your temple and your religion." Or "Work is love made visible." And "The soul is mightier than space, stronger than time, deeper than the sea, and higher than the stars." A gifted artist and linguist, it was in literature that Gibran made his mark. He wrote in both English and Arabic and dealt with themes of love, death, and nature. Deeply religious, he could be otherworldly, given to long, silent stretches that tuned out friends. "There are whole days at a time," Gibran said, "when I feel that I have just arrived from another planet."

1,999

951 KATHARINE HEPBURN (b. 1907)

Hollywood's leading leading lady

Director George Cukor described the ingenue Hepburn as a "boa constrictor on a fast," while

David Selznick declared, "Ye Gods, that horse face!" They cast her anyway, and her first film, *A Bill of Divorcement* in 1932, made her a star. She won an Academy Award for her next film, *Morning Glory*. Half a century later, she won an unparalleled fourth Oscar in *On Golden Pond*. We like Hepburn because she played them all— young heiress, savvy lawyer, passionate missionary, regal regent, and doddering old lady—in a career that spanned seven decades. While roles like the sophisticated Tracy Lord in *The Philadelphia Story* came naturally, the filming of John Huston's classic, *The African Queen*, with Humphrey Bogart, presented special challenges. When she was forced to climb into murky water in the Belgian Congo, the director had the prop men fire bullets into the water to scare the crocodiles away.

1,987

952 CARY GRANT (1904–1986) Hollywood idol

We almost rumbled over this one. What actor epitomized Hollywood in its heyday? John Wayne? Without a horse, he was nothing. Clark Gable? Frankly, my dear, we didn't give a damn. Paul Newman? Isn't he the salad dressing dude? We kept returning to Grant and his rags-to-riches story. Originally Archibald Leach, a British stilt walker in an acrobatic troupe, he moved to Hollywood in 1932 with a new name and a Pygmalion-like transformation into an elegant leading man. Grant's seventy-two movies include many of Hollywood's most memorable, like *The Philadelphia Story*, *Gunga Din*, *Bringing Up Baby*, *The Awful Truth*, and *Notorious*. Although romantic comedies were his specialty, he could carry dramas and Hitchcock thrillers. Nominated twice for an Oscar, he never won. Grant knew when to call it quits and made his last movie, *Walk Don't Run*, in 1966; he was given a special

oversight Oscar in 1970. He was debonair, witty, dangerously good-looking—and he always got the girl.

1,986

953 JULIUS NYERERE (b. 1922) independent Africa's elder statesman

Nyerere, president of Tanzania from its birth as Tanganyika in 1961 until his retirement in 1985, gets a mixed review. He banned opposition to his ruling Chama Cha Mapinduzi Party (the Party That Carries Things Around) and imposed Chinese-style socialism, policies that led to economic disaster, and prisons bursting with dissidents. Yet he was that rare bird, the honest politician. "I failed. Let's admit it," he said in his farewell speech. Africa loved him because he loved Africa, promoting African unity and Africa's cause in the world. And unlike so many other African leaders, he kept peace at home, lived simply, and gave up power voluntarily. "My success is building a nation out of this collection of tribes," he said. Returning to his village farm, he tilled the land himself, saying "It was great therapy to dirty your hands in some soil."

1,910

954 DWIGHT L. MOODY (1837–1899) American evangelist

We must pause to confess to a pro-Moody bias: One of the authors of this tome attended a boarding school founded by the bearded Bible thumper. The school's stern motto, coined by Moody himself, still rings in this alumnus's ears: "Eat your soup with a one-tined fork and don't complain." Moody was a key figure in the nineteenth-century evangelical movement, holding mass revivals in both America and Britain and establishing not only the Mt. Hermon School for Boys and the Northfield School for Girls in Massachusetts but also the Moody Bible Institute in Chicago. The former shoe salesman resembled

an Old Testament prophet and sounded like one to the more than one million people who heard him speak. **1,907**

955 AMINA (1560-1610) Nigerian warrior-queen

In one of the most male-dominated regions of a male-dominated world, men quaked at the mere mention of her name. Amina ruled the city of Zaria in West Africa and expanded it into the most powerful state of the Hausa people. Distant towns paid tribute to her; one sent forty eunuchs and ten thousand kola beans. But Amina didn't just sit around sipping an early version of Coke and chatting with a bunch of neutered attendants. Though she refused all suitors, legend has it that she took a different lover every night. A variation states that she had sex with a man in every city she subjugated—and then had him beheaded the next morning. After she died, her people sang this hymn to her memory: "Amina, daughter of Nikatau, a woman as capable as a man." **1,892**

956 LOUIS BRAILLE (1809-1852) beacon for the blind

The Frenchman Braille went blind at age three. First an awl plunged into one of his eyes as he was playing in his father's harness shop. Then disease robbed him of sight in the other eye. At age fifteen, while attending the National Institute for Blind Children in Paris, Braille became intrigued by a system of tangible dots on paper developed by a French captain for night communications on the battlefield. Braille used it to create his own system, based on combinations of up to six raised dots, of printing and writing for the blind. While fellow students embraced Braille's code, it didn't catch on worldwide until 1932—eighty years after his death. To this day it

serves as a major vehicle for the blind in gathering information. **1,874**

957 EDWARD LEAR (1812-1888) nonsense poet

*There was a scene painter named Lear
Who dabbled in poems quite queer;
His rhymes were all tricks
That we've dubbed limericks
His nonsense lived on through the years.*

1,861

958 INGMAR BERGMAN (b. 1918) cinema moralist

This Swedish screenwriter and director burst on the international scene in 1955 with his touching comedy *Smiles of a Summer Night*. He secured his place in film's hall of fame with the medieval morality drama *The Seventh Seal* in 1956; the psychological journey of an old man in *Wild Strawberries*, 1957; and the painful, intimate examination of family life in *Cries and Whispers*, 1972. Bergman's symbolic and complex films reveal the stark truth of human loneliness and torment. His themes and his trademark techniques—use of black and white film, frequent close-ups, and dream sequences—have profoundly influenced other filmmakers, including America's Woody Allen. Son of a Lutheran pastor, Bergman had a religious upbringing that surfaced in his preoccupation with right versus wrong. "For so many people, Bergman has been the man who showed the way to a cinema of the inner life," said critic David Thomson. **1,833**

959 JOHN VON NEUMANN (1903-1957) gamesman and computer wizard

Nuclear physicist Edward Teller joked that IBM owed half its wealth to its star consultant, the Hungarian-born Von Neumann, a leading devel-

oper of computers after World War II. A machine he called *maniac*—mathematical analyzer, numerical integrator, and computer—solved the problems blocking production of the first hydrogen bomb. In 1944 Von Neumann and Oskar Morgenstern wrote *Theory of Games and Economic Behavior*, which used mathematics to predict how adversaries would react under varying circumstances. That helped create complex nuclear-deterrence strategies, and it may have been the wheelchair-using Von Neumann—not Henry Kissinger, as many viewers now believe—who was the model for *Dr. Strangelove* in Stanley Kubrick's movie about atomic Armageddon. Like a lot of geniuses, Von Neumann had a photographic memory, but he was no ivory tower pedant. He liked martinis, dirty jokes, and poker. At that game he was a consistent loser, proving that theories don't always work. **1,825**

960 ADA BYRON LOVELACE (1815–1852) the computer's programmer

"Her thoughts were theorems," runs a line in Lord Byron's (385) *Don Juan*. He was describing Ada, countess of Lovelace, his only legitimate child. Tutored and self-taught, the British Lovelace became a math whiz. "It is through mathematics alone, we can adequately express the great facts of the natural world," she declared. Lovelace was enthralled by Charles Babbage's (351) analytical engine, the first automatic digital computer, and the two became lifelong friends. In her translation of an Italian paper on Babbage's invention, Lovelace made the machine usable by adding directions for programming it to compute numbers. But it was, after all, just a tool, only capable of doing "whatever we know how to order it to perform," she said. Lovelace should have stopped there; instead, she and Babbage used his computer to create a horse-betting formula. It failed, leaving Lovelace deeply in debt. **1,816**

961 ANDREW CARNEGIE (1835–1919) steel-minded philanthropist

Critics say Carnegie built his fortune on the backs of workers and ruined competitors. That's likely so. We include him, however, for his philanthropic largesse and its benefits to the world. Son of a poor Scottish weaver, young Carnegie arrived in America and started working in a Pennsylvania factory. By age twenty-seven the ambitious Carnegie was a railroad manager making \$50,000 a year, mainly through investments. In 1873 he began buying steel plants that later were merged into the Carnegie Steel Company, which by 1900 was producing a quarter of the nation's steel. He sold his empire to J. P. Morgan (124) for \$492 million a year later, making Carnegie the world's richest man. Then he gave it all away. Requests flooded him. "The Lord has gotten tired of beggars," Carnegie said, "and He has sent them all to me." The result: libraries, research institutes, university endowments, and grants to struggling scientists like Marie Curie (75). **1,803**

962 MARY PICKFORD (1892–1989) doll turned dealmaker

Actress Pickford was "America's Sweetheart," heroine of 52 feature films and 141 shorts, nearly all of them silents. Pickford and husband Douglas Fairbanks were the golden couple of the world, and their Beverly Hills mansion, Pickfair, the haven for Tinseltown's elite. Off-camera, the Canadian-born Pickford was smart and tough. The two-time Academy Award-winner represents the birth of superstardom. She demanded—and got—top dollar for pictures. And to seize artistic control from the megastudios, she formed the distribution company United Artists in 1919, with Fairbanks, Charlie Chaplin (795), and D. W. Griffith (145). While moviegoers loved the curly-blond Pickford as the innocent in films such as *Pollyanna* and *Rebecca of*

Sunnybrook Farm, they rejected her attempts to branch out. That and the advent of talking pictures prompted Pickford to retire from filmmaking in 1933. Mistakenly, said biographer Eileen Whitfield, Pickford "went to her grave feeling that her work would not stand the test of time." **1,778**

963 ROGER BANNISTER (b. 1929) the four-minute man

When statisticians started keeping track of race speeds in 1864, the record for running the mile was 4:56. Then runners got serious and shaved 55 seconds off the record by 1945. But sports aficionados believed it was physically impossible for man to break the four-minute barrier. Bannister, a medical student at Oxford, approached running scientifically, studying the physiological mechanics of the sport. Running against gusting winds on May 6, 1954, a nasty day in his native England, he won the race in 3:59.4. His feat was hailed on newspaper front pages around the world as a victory for the human race. Bannister received his medical degree, became a neurologist, then was knighted in 1975. He finishes our race in the millennium's top thousand because, by doing what couldn't be done, Bannister reminded us that our greatest struggles are within ourselves. **1,772**

964 JOHN L. LEWIS (1880-1969) powerful voice of organized labor

Lewis wins praise for raising the standard of living of miners between the world wars, but blame for exerting dictatorial power over the United Mine Workers of America. The Iowa-born Lewis had forebears who were Welsh coal miners, and he, too, left school to work in a mine. But Lewis also was a leader. He rose through the ranks to seize the presidency of the UMW in 1920 and, during the Great Depression, unionized the rubber, auto, and steel indus-

tries as well. He became an important presence in national labor affairs and provoked President Roosevelt (37) and, later, President Truman (485) by launching crippling national strikes. Lewis was an imposing figure with his jutting chin, bushy eyebrows, and flair for the dramatic. "If ye be an anvil, lie very still," he often told followers. "If ye be a hammer, strike with all thy will." **1,751**

965 AARON COPLAND (1900-1990) composer who made folk tunes classics

Son of a Russian-Jewish immigrant, Copland grew up in a drab Brooklyn neighborhood. Life changed after his sister taught him to play the piano. By age fifteen he wanted to become a composer. Copland learned harmony through a correspondence course until he could travel to Paris for study with musician and conductor Nadia Boulanger. He experimented with jazz rhythms in such works as *Music for the Theater*, then turned to leaner, more dissonant compositions. His complex *Piano Variations* is one of the most important works in contemporary piano literature. Copland is most famous for ballet scores like *Billy the Kid*, *Rodeo*, and *Appalachian Spring*, all based on folk themes. As a teacher at Harvard and the Tanglewood music festival, he exerted a strong influence on young American composers. Summing up his friend's legacy, critic and composer Virgil Thomson called Copland's life "a long, steady, indefatigable pastoral." **1,735**

966 SRINIVASA RAMANUJAN (1887-1920) numbers theory guru

Just think: A fifteen-year-old boy living in the hinterlands of turn-of-the-century India comes across an out-of-date textbook in the local school and, without any other guidance, formulates theorems it took the finest minds of Europe cen-

curies to develop and ideas that we are now only beginning to understand, including elements of so-called superstring theory. Ramanujan wrote plaintive letters to British mathematician Godfrey Hardy who, recognizing his genius, invited him to England for a spot of tea and some tutoring. Hardy concluded that this son of an office clerk was a "thinker of profound and invincible originality," whose strange notions must be true because, "if they were not true, no one would have had the imagination to invent them." **1,721**

967 **CHARLES DREW** (1904–1950) *blood-bank pioneer*

As America's foremost authority on blood preservation, Drew oversaw a project in 1941 to ship liquid plasma to Britain and was put in charge of the first American Red Cross blood bank the following year. His role in supplying dried plasma to American soldiers in World War II saved untold thousands of lives. Yet over his protests the military first excluded black donors, then segregated their blood. "No Negro blood accepted, but"—the *Chicago Defender*, a black newspaper, thundered—"when the Japanese bombed Pearl Harbor and maimed hundreds of American soldiers and sailors, it was blood collected by a Negro surgeon that saved their lives." In a horrible irony, Drew bled to death after an automobile accident in rural North Carolina. The myth persists that he was turned away from a white hospital; in fact, white doctors labored to save him. **1,703**

968 **CAPTAIN KIDD** (1645–1701) *the reluctant pirate*

Cutlass in hand, Kidd roamed the seas under a flapping skull-and-crossbones flag, plundering merchant vessels and crying "Shiver me timbers." So much for the myth. In reality Kidd was a churchgoing family man, living in a Manhattan

house with real pewter in the sideboard and a Turkish carpet on the parlor floor, when he was strong-armed by the British crown into pursuing pirates preying on the vessels of England's East India Company. He did his best but got sloppy and a little greedy, indulging in petty acts of quasi-piracy to secure enough loot to satisfy his near-mutinous crew. Once, in a rage, he bopped his gunner over the head with a wooden bucket, killing him. Hauled off to London, Kidd was convicted of murder and piracy and hanged. But to this day his ghost ship plies the misty coasts, guarding his buried pieces of eight. **1,691**

969 **SCIOPONE RIVA-ROCCI** (1863–1937) *sphygmomanometer man*

Try saying that three times quickly, and you could end up with high blood pressure. But at least we've got the invention that can diagnose the problem. Often symptomless, high blood pressure afflicts sixty million Americans and is a chief contributor to deaths from stroke, heart failure, or other complications. Riva-Rocci, an Italian physician, invented the first accurate tool to diagnose hypertension by measuring the force of blood against artery walls. Eighteenth-century researchers devised cruder methods that required inserting a tube into a blood vessel to measure the pressure of the pumped blood. Then Samuel Siegfried von Basch developed a sphygmomanometer (from the Greek word *sphygmos*, for "pulse") that was noninvasive but, unfortunately, inaccurate. In 1896 Riva-Rocci, building on Von Basch's work, fashioned an accurate arm cuff similar to the ones used today (minus the Velcro, of course). **1,677**

970 **HARRY HOUDINI** (1874–1926) *the great escaper*

When Houdini boasted that he could break out of any jail, the warden of a Washington, D.C.,

prison locked him in an impenetrable cell. Twenty-one minutes later Houdini strolled into the warden's office after picking the locks of other cells and rearranging the prisoners. He escaped thousands of straitjackets, handcuffs, steamer trunks, water torture cells, and coffins. Born Ehrich Weiss in Budapest, he grew up in the United States and chose his stage name to honor the father of modern magic, Robert-Houdin. Houdini played vaudeville with his first sensational illusion, "Metamorphosis," in which he magically changed places with his assistant. He's the millennium's master of illusion. Part magician, part lock-picker, and part showman, Houdini died on Halloween from a burst appendix. He promised his wife he'd come back to haunt her, but repeated seances proved that Houdini ultimately failed to escape death. **1,602**

971 VIRGINIA APGAR (1909-1974) *baby's best friend*

American anesthesiologist Apgar's system for evaluating the condition of a newborn right after birth has saved countless lives worldwide, including who knows how many baby boomers. As director of anesthesiology at Columbia-Presbyterian Medical Center in New York, she attended thousands of deliveries but found medical teams paid more attention to mothers than babies. "I kept wondering who was really responsible for the newborn," Apgar said. "Birth is the most hazardous time of life." So in 1952 she devised a way of gauging a newborn's well-being, and it became standard in delivery rooms and shifted the focus to the new arrival. The Apgar test evaluates breathing, heart rate, color, muscle tone, and reflexes at one minute and five minutes after birth. Each feature is scored from 0 to 2, making a total of 10 possible points. A low

score of 0 to 3 signals the need for urgent medical care. **1,601**

972 COCO CHANEL (1883-1971) *arbiter of fashion*

When the impatient Chanel dirtied her head in a gas heater explosion in her suite at the Paris Ritz in the 1920s, she hacked off her long dark hair so that it would be easier to shampoo. She appeared at the opera that evening with bobbed tresses, and a fashion earthquake rippled around the world. Such was the influence of Chanel, who revolutionized women's clothing. Her couture house dictated trends for much of the twentieth century. As fashion writer Enid Nemy noted, "She emancipated her sex from the tyrannies of fashion." Chanel simplified design, rejected whalebone stays and corsets, raised hemlines, and introduced jersey as a comfortable material for her signature suits. The force behind turtle-neck sweaters, trench coats, costume jewelry, and bell-bottom pants, Chanel also made "the little black dress" an essential in women's closets. She earned a fortune with her perfume, Chanel No. 5. **1,600**

973 FRANCIS BARING (1740-1810) *founder of the world's first global investment bank*

"There are six great powers," France's duc de Richelieu remarked in 1818, "England, France, Russia, Austria, Prussia, and the Baring brothers." The house of Baring financed European trade in the years leading up to the Industrial Revolution. It financed Britain's armies against George Washington (22) and Napoleon (16). It financed the Louisiana Purchase, which doubled the size of the United States. It financed the rail barons and industrialists of the booming American republic. It recovered from a lending fiasco in 1890 and sub-

sequently financed Britain's imperialistic expansion. Then, 232 years after its founding, a twenty-eight-year-old trader in Singapore drove the bank under with a bad \$1 billion bet on Japanese stocks. In his official portrait the eccentric Sir Francis is shown cupping his ear to display his deafness. Let's hope that, in the afterworld, he hasn't heard of his creation's ignominious end. **1,577**

974 RENÉ-THÉOPHILE-HYACINTHE LAËNNEC (1781-1826)
stethoscope inventor

The French Revolution and Napoleonic wars were busy times for French doctors such as Laënnec, who began working in hospitals when he was fourteen years old. He was best at treating tuberculosis and emphysema, which were diagnosed, in part, by the ancient art of auscultation—putting an ear to a patient's chest to hear the rhythms of the heart and lungs. Laënnec invented a better way—a simple hollow tube, twelve inches long, that he called the stethoscope, from the Greek word for chest, *stethos*. He got the idea in 1816 after watching two children amuse themselves on a Paris street by listening to the amplified sound of a stick tapping against a tube. He published his findings in 1819, and doctors all over the world were soon using stethoscopes. Laënnec probably used one on himself; he died of lung disease. **1,571**

975 JETHRO TULL (1674-1741)
farmer outstanding in his field

Rock fans may not know that the band Jethro Tull was named for an English farmer who created beautiful harmony with turnips and 'taters. In those days many farmers planted seeds haphazardly, the way a modern suburbanite throws grass seed on a lawn. Tull's 1731 book, *The New Horse-Houghing Husbandry*, synthesized his

lifetime of agricultural study and taught farmers how to maximize yields of grain, potatoes, beans, and turnips by sowing seeds deeply and aerating the soil between the furrows. Using Tull's methods, farmers needed less manure and didn't have to let land lie fallow year upon year. Some contemporaries complained that he hyped his claims. A good crop of wheat for thirteen years without using manure? Bull! said the critics. But Tull was right, and he had plenty of disciples, including the French philosopher Voltaire (36), who turned his own holdings into a Tullian model farm. **1,536**

976 SERGEY KOROLYOV (1907-1966)
space racer

The space age began on October 4, 1957, when a Soviet team led by Korolyov launched Sputnik, the first man-made satellite. He had been tinkering with rockets since the 1930s, even while he was in a special Soviet gulag that Stalin (82) reserved for valuable, politically suspect scientists. Stalin's successor, Nikita Khrushchev (619), pined for a space feat that would make America cringe, and Korolyov delivered. He sent the 184-pound Sputnik to an orbit 560 miles high. For the United States it was a technological Pearl Harbor. Korolyov followed by launching Laika, the first space dog, Yuri Gagarin (499), the first space man, and Valentina Tereshkova, the first space woman. Without such challenges the American space program that eventually surpassed the Russians'—complete with communications satellites, men on the moon, and space shuttles—might not have gotten off the ground until the twenty-first century. **1,521**

977 HENRY SHRAPNEL (1761-1824)
widow-maker

The duke of Wellington claimed that the Battle of Waterloo was won on the playing fields of Eton. His artillery commander, Sir George

Wood, gave the credit to Shrapnel, who invented the cannon shells filled with musket balls that mowed down Napoleon's (16) troops at the pivotal skirmish for the farmhouse at La Haye Sainte. Shrapnel was a career army officer who had spent his adulthood and thousands of pounds of his own money perfecting his shells; it was hard to get the delicate fuses to go off at the optimum moment. He finally got it right, and a grateful British government—after years of keeping his achievement a state secret—gave Shrapnel a £1,200 pension for life. Others built on his innovation and made shells, bombs, and hand grenades even more horrific, but shrapnel is still the universal name for the shards of deadly metal inside those weapons. **1,501**

978 ALFRED SLOAN, JR. (1875-1966)
*trailblazer of modern
 corporate management*

As head of General Motors in the 1920s, Sloan transformed a hodgepodge of fledgling car companies into America's biggest industrial enterprise. Under his leadership GM went from making one of every six cars sold in the country to one of every two. Sloan championed decentralization of operations, but centralization of administration. He preached the need for an "unending search for facts." Ironically, the first car he purchased as a young man lacked an engine. Attracted to its patent leather mud-guards and red leather seats, he forgot to look under the hood. He later sold the car, a Conrad, for one dollar to a man who, dissatisfied with its performance, dynamited it in a field in Newark, New Jersey. **1,490**

979 ALBERT LASKER (1880-1952)
capitalism's cheerleader

Lasker set the course of modern advertising. His Chicago agency, Lord & Thomas, made Kotex

and Kleenex household names, sold America on Quaker Oats puffed cereals that were shot from guns, and hooked women on cigarettes by urging them to "reach for a Lucky instead of a sweet." With the help of a couple of geniuses who worked for him, Lasker transformed advertising from a business that merely placed ads to one that created them. From J. E. Kennedy he drew the inspiration that advertising was "salesmanship on paper," not just grand claims. From Claude C. Hopkins he gained the insight of viewing advertising as a science that requires careful analysis of both product and customer. Lasker also developed gimmicks like money-back guarantees, premiums, and coupons. "If the early twentieth century in advertising history can be described in a phrase," wrote scholar Stephen Fox, "it would be: The Age of Lasker." **1,472**

980 DANIEL HALE WILLIAMS (1856-1931)
first heart surgeon

In 1891 James Cornish was stabbed in a brawl. Ordinarily his treatment would have been opium, then a funeral. But in an era when surgery was primitive and it was tantamount to a death sentence if doctors cut into the chest cavity, Williams took the risk. After opening up Cornish's chest, Williams sutured the ruptured pericardium, the sac surrounding the heart. The operation was a success—and no infection followed either; Williams was scrupulous in sterilizing instruments and having his operating room scrubbed, then sprayed with carbolic acid. The son of multiracial parents, Williams founded Provident Hospital in Chicago, the first interracial hospital in the United States to provide training for black interns and nursing candidates excluded from white schools. He amassed honors throughout his life and died at age seventy-five. As it happened, Cornish outlived his surgeon by ten years. **1,461**

981 A. P. GIANNINI (1870–1949) *the people's banker*

That is what this American son of Italian immigrants called himself, and that is what he was. The founder of the Bank of Italy in San Francisco, Giannini set up a stand on a pier after the earthquake of 1906 and offered to lend money to anybody who needed it, even as established banks held back. By the mid-1940s his two great innovations—extending credit to the masses and opening branch banks—had transformed his renamed Bank of America into the biggest bank in the world. For all Giannini's populist impulses, his creation came under attack by one of the most powerful writers of the day, John Steinbeck (901), who modeled the rapacious Bank of the West in his novel *Grapes of Wrath* after it, and by Congress, which outlawed interstate banking in the McFadden Act of 1927. **1,459**

982 JOHN PEMBERTON (1831–1888) *soda papa*

Coca-Cola legend describes Pemberton as a southern gentleman pharmacist who concocted the world's most successful soft drink in a kettle in his backyard. However, Mark Pendergrast's unauthorized corporate biography asserts that the doctor was a morphine-using patent-medicine man who studied the properties of coca leaves to cure his own addiction. Whatever. The undisputed fact is that Pemberton invented the thick brown syrup that flavors the world's most successful soft drink. Before Pemberton's death Asa Candler bought the secret formula, created the signature logo, and masterminded the marketing. The soft drink industry took off, spawning dozens of Coke imitators, including the most formidable challenger, Pepsi-Cola. But Coke is still king. People in 195 countries drink an estimated forty thousand Cokes every second,

and Coke is one of the world's most recognizable products. Heck, it's one of the few universal words. **1,437**

983 MARION DONOVAN (fl.1950) *parents' hero, environmentalists' nemesis*

How do you define an environmentalist? Someone whose kid was toilet-trained last week. In our heads we agree that the billions of disposable diapers that hit landfills annually can't possibly be good for the earth. But committed environmentalists though we are, in our hearts we loved throwing those stinky diapers into the garbage. Donovan was the genius behind the earliest disposable diapers. In 1950 manufacturers weren't interested in her "Boater," which she fashioned from cotton padding and covered with shower curtain material. She marketed it herself and made a fortune. About a decade later Procter & Gamble introduced its version of the disposable diaper, Pampers, but it took a harried New York housewife to come up with the original idea. **1,428**

984 MAHALIA JACKSON (1911–1972) *a joyful noise unto the Lord*

Jackson was the queen of gospel music, an idiom she helped invent; one admirer said she bit into notes like a "terrier playing tug-o'-war with an old shoe." As a child in New Orleans, Jackson soaked up street music in the early years of jazz. Moving to Chicago at age sixteen, she was soon electrifying churches with her high-voltage performances. Some congregations objected to all the stomping and moaning, but she retorted by quoting Psalms 47:1: "Shout unto the Lord." A fundamentalist Christian, she refused all offers—as high as \$25,000 a night in Las Vegas—to sing in nightclubs, despite her first husband's admonition to "stop wasting her voice hollering in

churches." When she sang "He's Got the Whole World in His Hands," though, she had the whole world in hers. **1,400**

985 HENRY ROUS (1795-1877) dictator of the turf

That was the nickname of the man who did more than anyone to bring honesty to professional horse racing, the most popular betting sport ever. Rous quit the Royal Navy after a frigate he commanded ran aground, and he became an officer of the London Jockey Club. His 1850 book, *Laws and Practice of Horse Racing*, railed against fixers, touts, sly bookmakers, and worst of all, freelance handicappers in cahoots with corrupt jockeys. In 1855 Rous was appointed honorary public handicapper, and the rules of racing in England and the odds at the best-attended course, Newmarket, were set under his supervision. His views "were invested with an official, almost divine, authority," racing historian Roger Longrigg wrote. Rous was so respected, he was allowed to bet on races whose odds he had set, and no one accused him of sharp practice. **1,376**

986 HENRY ROBERT (1837-1923) order keeper

We offer, second, and approve a motion to recognize Robert as the most consulted authority on parliamentary procedure. Without such rules democratic assemblies would deteriorate into melees. Robert was a U.S. Army engineer and inveterate joiner who perceived a need for common procedures that would work for all kinds of organizations. The four-thousand-copy first edition of *Robert's Rules of Order*, published in 1876, sold out in three months, and its revised edition remains the bible of parliamentary procedure in much of the Western world. Most of the rules

are simple: One person speaks at a time. Others are arcane: "Privileged motions to recess take precedence over all subsidiary and incidental motions." The book made him famous, but he kept his job as an engineer in charge of river and harbor projects for the army, retiring in 1901 as a brigadier general. **1,370**

987 AL NEUHARTH (b. 1924) newspaper innovator

Call it McPaper or Junk Food Journalism if you will, but Neuharth changed the direction of journalism when he launched the national-market *USA Today* in 1982. The newspaper's breezy style, reliance on computer graphics, and innovative use of color revived an outdated newspaper industry whose death had been regularly predicted since the advent of television. *USA Today* influenced other media. Even *The New York Times*, the great gray lady of journalism, beefed up its graphics and switched to color. The border between television news and entertainment blurred. Indeed, Neuharth created a newspaper for people who watched television. Like other highbrow journalists, columnist Jonathan Yardley of *The Washington Post* scoffed at McPaper: "Like parents who take their children to a different fast-food joint every night . . . *USA Today* gives its readers only what they want. No spinach, no bran, no liver." And don't forget the sour grapes. **1,352**

988 WALTER C. WINGFIELD (c.1833-1912) tennis pro

The French *jeu de paume* was popular among priests in the Middle Ages to break up the monotony of monastic life. But when the monks started playing tennis instead of tending their flocks, *jeu de paume* was outlawed by Louis IX (613). We trace the roots of tennis to these monastic athletes but give credit for the modern

game—complete with a standard court size, racket, and net—to Wingfield. A retired British army major, Wingfield invited some friends to a lawn party at his home in Wales to play his new-fangled game, Sphairistike (Greek for “ball-playing”) in 1873. The guests were amused. Wingfield applied for a patent so he could market his hour-glass court, curved nets, and spoon-shaped rackets. He also wrote down twelve basic rules. The game was such a hit that four years later, in 1877, Britain played host to the first world tennis championship—at Wimbledon. **1,350**

989 **FELA** (1938–1997) *dissident with a saxophone*

Fela was a cool jazzman in the Miles Davis mold until he visited the United States in 1969 and met the Black Panthers. He returned to Africa and invented what is now known as Afro-beat: music with insistent rhythms and searing lyrics in pidgin English. He became the most popular composer and performer of twentieth-century African music—and also the leading critic of his native Nigeria's repressive governments, a role he seized in 1977 after he and scores of political supporters were beaten and burned out of their compound in Lagos. In 1984, when Fela was jailed on a trumped-up charge of currency manipulation, he made Amnesty International's list of prisoners of conscience. In concert Fela wore only bikini briefs, and in a traditional ceremony in 1978 he married twenty-seven dancing girls. All but eight left him, and he died after a long struggle with AIDS. **1,300**

990 **JOSEPH BRAMAH** (1748–1814) *inventor awash in ideas*

An accident at age sixteen made him lame and unsuitable for work on his father's farm in England, so he was apprenticed to a carpenter

and began a life of tinkering that led to some of the millennium's most important inventions. In 1778 Bramah patented a water closet that ushered in the modern age of toilets. He perfected the hydraulic press in 1795, harnessing the laws of liquid motion to do the world's heavy lifting. He proposed the idea of propellers to move ships, a thought that became useful when steam-powered boats replaced sailing craft. He designed a lock with such precision he confidently promised £200 to the first person who could pick it. It took an American safecracker fifty-one hours to collect the bet, thirty-seven years after Bramah died. **1,286**

991 **HUBERT BOOTH** (1871–1955) *dust buster*

Booth was a respected mechanical engineer when, in 1901, he saw a demonstration of a new railway car cleaning machine that used compressed air to blow dirt from one end of the car to another. Wrong approach, he thought, so he built the first successful dirt suction machine. At £350, the initial vacuum cleaners, as he was the first to call them, were too expensive for the average family, but they couldn't be beat for big jobs like the 1902 cleanup of Westminster Abbey after the coronation of King Edward VII. The soon-to-be-ubiquitous smaller models that were based on Booth's prototype not only made the world's indoors cleaner, they stimulated women's liberation from household drudgery. In Booth's native England vacuum cleaners are called “Hoovers,” after the more successfully marketed machines of an American company. We think that sucks. **1,201**

992 **EDMOND HOYLE** (1672–1769) *absolute authority on games*

This ace of a guy made it ungentlemanly to cheat at cards. As any four-year-old who desperately wants to win Go Fish knows, this is one of life's

most difficult moral lessons. According to Hoyle, it's also one of the most important. A crackerjack card player in England, Hoyle earned a living by teaching whist, a forerunner of bridge. In 1742 his *Short Treatise on the Game of Whist* was published. It wasn't the first whist tutorial—an earlier one had advocated winning by any means necessary. Hoyle's play-by-the-rules approach, however, unequivocally established the polite way to play cards. Then he turned his attention to the rules of backgammon, chess, and other contests. Hoyle's rule books have been amended countless times to include later versions of card and board games. He's been dead for centuries, but Hoyle still has the last word on gamesmanship. **1,193**

993 ELLA FITZGERALD (1917-1996) *first lady of jazz*

Fitzgerald's sixty-year career embraced big band songs, show tunes, bossa nova, and novelties like her first hit, "A-Tisket, A-Tasket." Originally a bebop singer, Fitzgerald outdid Louis Armstrong (322) in scat singing—improvising using sounds and syllables, as with an instrument. But her later jazz renditions, with her perfect intonation, clear diction, and nearly three-octave range, set her apart. Fitzgerald's triumphs were her American songbooks—comprehensive recordings of such composers as Ira and George Gershwin (857), Irving Berlin (469), and Cole Porter (900). Reared in a New York City orphanage, Fitzgerald was a teenage runaway when she won a Harlem talent show. She worked first with Chick Webb's band, then hooked up with impresario Norman Granz to tour Europe and Asia and perform at the New York Philharmonic. While some critics blasted her voice as girlish and shallow, fans and composers treasured her. "I never knew how good our songs were," Ira Gershwin said, "until I heard Ella Fitzgerald sing them." **1,182**

994 WILLIAM LEVITT (1907-1994) *suburban sprawler*

"Any damn fool can build homes. What counts is how many can you sell for how little," the father of suburbia once declared. Historians agree that Levitt was a genius in both areas, though for the longest time he refused to sell to blacks. After World War II Levitt's planned community on Long Island was a mecca for returning veterans and their baby boomers. En route to putting up about 140,000 boxlike homes, Levitt did for housing what Henry Ford (51) did for automobiles. He analyzed the construction and reduced the work to twenty-seven basic steps. Each worker was trained to repeat an assignment over and over again at different housing sites, beginning in Levittown, New York. Levitt ended up a multimillionaire who lived in a thirty-room mansion, but his "little boxes made of tickytacky," to quote one scornful folksong, were the prototypes for affordable housing that sparked the flight from urban centers and the development of suburbs. **1,167**

995 ELIJAH MCCOY (1844-1929) *the original real McCoy*

The Canadian-born son of fugitive slaves, McCoy became a mechanical engineer, but soon found that white employers didn't want his expertise. He finally got work on the Michigan Central Railroad as a fireman who oiled the engine, a duty that meant periodically stopping the train for lubrication. The same procedure applied to factory machines. Without a steady supply of oil, moving parts stuck together, friction resulted, and operations ground to a halt. To avoid these wasteful stoppages, McCoy invented the lubricating cup in 1872. Through a system of canals and connecting devices, it automatically oiled steam engines while they ran. Factories

quickly adopted it. In 1892 McCoy developed a similar system for railroad locomotives. Thereafter buyers of heavy machinery would ask if the "McCoy system" were included. Invariably, salesmen would reply, "It's the real McCoy," a phrase that's come to mean "authentic." **1,143**

996 **BERNARD CORNFELD** (1927–1995)
*the man who sold mutual funds
to the American masses*

The son of a Romanian immigrant, Cornfeld started peddling mutual funds—which spread investors' risk by putting their money in a basket of stocks—in the 1950s, just as the investment vehicles were catching on. Off he went to Paris, setting up Investors Overseas International and its huge Fund of Funds, and issuing the public this challenge: "Do you sincerely want to be rich?" He became almost as well known for jetting around the world from his French château accompanied by celebrities and bathing beauties as for his financial wizardry. Cornfeld fell afoul of American regulators, ultimately giving up his tottering empire to the soon-to-be-fugitive wheeler-dealer Robert Vesco. But for all Cornfeld's failure, it was he who pioneered the great American financial revolution that has since spread to the four corners of the globe. **1,122**

997 **MARILYN MONROE** (1926–1962)
original Candle in the Wind

Women imitated her, men fawned over her, playwright Arthur Miller and baseball slugger Joe DiMaggio married her, Andy Warhol (1,000) painted her, Norman Mailer wrote about her, and Elton John sang about her. Forget about her acting—Monroe makes the grade as the millennium's blond bombshell sex symbol. A charismatic presence on screen, Monroe starred in a few memorable films, like *Some Like It Hot* and

The Seven Year Itch. It was only after her suicide in the nude at age thirty-six that Monroe achieved icon status, surpassed perhaps only by Elvis (352). For years after her death, DiMaggio had roses delivered regularly to her grave. When Elton John was asked to sing at the 1997 funeral of another of the century's fairy-tale characters, he chose to rework his elegy to the former Norma Jean Baker. "Candle in the Wind," à la Britain's Princess Diana, became the bestselling song ever. **1,050**

998 **THEODORE SEUSS GEISEL** (1904–1991)
author of zany children's books

Geisel, aka Dr. Seuss, makes our list for possessing the millennium's liveliest imagination. Since *The Cat in the Hat's* 1957 publication, generations of children around the world have grown up with Geisel's rhyming absurdities. Publisher Bennett Cerf bet Geisel fifty dollars that he couldn't write a children's reader using just fifty words. Geisel won with the persistent Sam-I-Am in *Green Eggs and Ham*. Geisel published forty-seven books under his middle name (which incidentally rhymed with "voice," not "juice"). He imagined a power-hungry turtle named Yertle based on Hitler (20), a Christmas-hating Grinch who learns to love, the egg-hatching faithful elephant Horton, and a nameless naughty feline who wreaks havoc when children are home alone. Aside from his quirky half-human, half-beast characters, Geisel was a rhyming genius. Who else could have made millions from the line "I do not like green eggs and ham, I do not like them, Sam-I-Am"? **1,028**

999 **GEORGE SANTAYANA** (1863–1952)
profound thinker

Was it separation anxiety that infused the philosophy of this Spanish-American man of letters

with such gloom and endowed him with what he called his "subconscious" homosexuality? Neglected by both parents as a child, he described in his autobiography his sense of disconnectedness: "I was brimming over with the sense of parting. I found myself, unwillingly and irreparably, separated from Spain, from England, from Europe, from my youth, and from my religion." Santayana was a materialist, for whom matter was the ultimate reality, and at times he seemed to embrace nihilism. "The brute necessity of believing something so long as life lasts does not justify any belief in particular," he wrote. Still, he drew lessons from history. To paraphrase his most famous epigram: Those who cannot remember the past are condemned to read this book. If necessary, go back to number 1 and start over.

1,004

1,000

ANDY WARHOL (1928-1987)
*fifteen-minute flash of hope
for the rest of us*

That's it, reader. You may not have made our list, and in all likelihood you're not going to be included in a *Who's Who* of the one thousand most important people of the century either, but don't despair. There's an easy solution. Under pop artist Warhol's scenario, everyone is in for a fleeting moment of fame. Remember Barney Clark? Donna Rice? Warhol, with his platinum wigs, dyed eyebrows, and flaming demeanor, got his own shot at immortality painting ordinary objects from his culture, including thirty-two Campbell's Soup cans, which sold for \$100 each. After Warhol's death following gallbladder surgery, those signature soup cans were worth more than \$10 million. All well and good, but there's no way Warhol would have made the cut here simply for that. We just loved his prediction, "In the future everybody will be world famous for fifteen minutes" . . . or perhaps 150 words.

1,000

Ten Who Almost Made It

Here are some people we left out, and why they didn't make the grade.

LADY GODIVA (c.1040–1080)

She made a deal with her husband, the Earl of Mercia. He would lighten the tax burden on impoverished Coventry, England, if she would ride naked through town on a white horse. That makes her the patron saint of tax relief or the millennium's first exhibitionist. Either way, she deserves no more than a peep, here, among the also-rans.

AMERIGO VESPUCCI (1454–1512)

One of the unending debates of history is whether the Florentine writer, Vespucci, manufactured the story that he explored the New World in the decade after Columbus's discoveries. We say he hyped. German cartographer Martin Waldseemüller said he didn't. In 1507 Waldseemüller published the first map that showed the Western Hemisphere to be separate from Asia and gave Vespucci credit for discovering the difference. He labeled the map "America," his translation of Amerigo. Having your name on two continents would be a thrill, but it's not enough to get you into the top thousand. Here's a thought: Maybe we should have included Waldseemüller?

POCAHONTAS (c.1595–1617)

The Native American princess came very close to making the list. Not for stopping Papa Powhatan from braining Virginia colonist John Smith, but

for marrying Smith's pal John Rolfe. Some historians say their union helped the English preserve a toehold in America. But we decided it would have happened anyway, given the European settlers' superior firepower.

PYOTR ILICH TCHAIKOVSKY (1840–1893)

We took half of Chuck Berry's advice. We refused to roll over Beethoven (10), but we tell Tchaikovsky the news: He ranks below two dozen other music makers from Ludwig Van himself to Ella Fitzgerald (943). We dumped the Russian composer of lush symphonies and crowd-pleasers like *The Nutcracker* ballet score and the *1812 Overture*, because his unrelenting mélange of syrupy sweetness and bombast ends up being merely boring.

RONALD REAGAN (b. 1911)

We almost included the actor-turned-president for his portrayal of George Gipp, the dying football player in *Knute Rockne, All American*. What drama! His performance in the White House from 1981 to 1989 didn't measure up, except when he went to divided Berlin and said, "Mr. Gorbachev, tear down this wall." Gorbachev (237) did—or at least he didn't stop it from tumbling—and made the top thousand. Reagan's fans, accustomed to having their hero dismissed as a lightweight, are sure to say of our decision: "There you go again."

Ten Who Almost Made It

JOHN F. KENNEDY (1917–1963)

To prove our bipartisanship, we also exclude the man who said, "Ask not what your country can do for you, but what you can do for your country." Like millions around the world, we remember exactly what we were doing the moment we heard of his assassination on December 22, 1963: crying. But as those memories fade, what will be his legacy? A frat boy image and a three-year presidency cut short before it could achieve lasting influence.

OPRAH WINFREY (b. 1954)

At the end of the millennium, the richest black woman in America was more powerful than the president; when she spoke, people listened. She stopped eating beef, and cattlemen had a cow; she featured books on her talk show, and they hit the bestseller lists. We would have included her had her fame spread outside the United States or if she had invented the genre of talk television instead of being just a magical practitioner.

WILLIAM GATES (b. 1955)

As a scientist and technical innovator, the man who started Microsoft Corporation at age nineteen fails to equal the computer whizzes in this book. His achievement was in the field of salesmanship; his company's MS-DOS and Windows products captured the market for personal computer operating systems. That makes him a modern-day Jakob Fugger (493) or John D. Rockefeller (486): a mogul, but nothing more. When he starts giving his zillions to charity, we'll consider him for a future edition.

CAL RIPKIN, JR. (b. 1960)

He broke Lou Gehrig's record by playing in 2,131 consecutive baseball games, making him the iron man of sports. Big deal. Millions of people had already accomplished his feat: showing up for work every day.

DIANA (1961–1997)

The beautiful princess who charmed the world died too soon for lasting influence. If her impossible dreams had come true—the abolition of land mines and the humanization of Britain's royal stuffed shirts—she would have ranked in the top thousand.

Some Interesting Facts

Where They Lived

We associated our top 1,000 people with fifty-nine countries, and it wasn't always easy to determine who came from where. Remember the old joke about why the Austrians are considered so clever? They have managed to convince the world that Beethoven (born in Germany) was an Austrian and that Hitler (born in Austria) was a German.

We say they were both Germans—and that Einstein, who emigrated to America when he was in his fifties, was, too. Many of the people born in the first one-third of the millennium, particularly those from the Islamic world, were assigned to the country where their birthplace is now

located. An exception to that was our decision to assign three great Mongol leaders to Mongolia, though they weren't all born in what is now Mongolia. If nothing else, this proves that great people tend to move around.

Here's our list:

United States	267	Portugal	8	Afghanistan	2	Pakistan	1
Great Britain	173	Turkey	7	Israel	2	Byzantium	1
France	114	Denmark	6	Cuba	2	Tanzania	1
Germany	88	Sweden	6	Ethiopia	2	Nicaragua	1
Italy	75	Argentina	6	Nigeria	2	Tunisia	1
Russia	33	South Africa	6	Lebanon	1	Palestine	1
Netherlands	31	Ireland	5	Morocco	1	Arabia	1
Spain	27	Hungary	5	Peru	1	Chile	1
China	18	Czech/Slovakia	4	Cambodia	1	Iceland	1
Japan	17	Brazil	3	Haiti	1	Romania	1
India	13	Canada	3	Albania	1	Norway	1
Austria	12	Mexico	3	Zaire	1	Kenya	1
Poland	11	Egypt	3	Ghana	1	Bosnia	1
Switzerland	8	Venezuela	3	Australia	1	Iraq	1
Persia/Iran	8	Mongolia	3	Sudan	1		

When They Lived

We also thought it would be enlightening to track when the greats lived. To make things consistent, we've organized this list according to date of birth (so anyone living on the cusp of a century change may fall within an earlier time) and further simplified things by looking at one-hundred-year blocks. Here's where they fall:

CENTURY	NUMBER
10th	7
11th	17
12th	29
13th	26
14th	22
15th	54
16th	71
17th	53
18th	168
19th	417
20th	136

How They Lived

How did our 1,000 achieve greatness? In looking at their occupations (for lack of a better word), we found that the top players of the millennium often played at many games, and that these games ran the gamut from choreographer to revolutionary.

What was most interesting to us as we compiled this list was that few people achieved greatness in only one area. Most excelled in many fields (some overlapping, some not), as a philosopher, lawyer, and mathematician; or revolutionary, leader, and soldier. You get the idea. Still, we tried to connect each person to a particular field. Because it's nearly impossible to categorize a

person's life in one word, we've created general categories by *area* of interest. So painter, publisher, and dancer all fall in the category of Artist/Writer, etc., and likewise anthropologist, mathematician, and physician in Scientist/Inventor. At least in part, this list gives a different perspective on our choices for top 1,000—who, why, what. See what you think.

Artist/Writer/Musician (and other creative pursuits)	312	Philosopher/Religious Figure	107
Politician/Military Figure/Activist	256	Industrialist/Business Figure	57
Scientist/Inventor	219	Explorer/Adventurer	31
		Historian/Lawyer	18

Selected Bibliography

Babe Didrickson Zaharias liked to lie about her age; some history books point to Elias Howe as the sewing machine's inventor; and Procter & Gamble's website credits one of its employees with designing disposable diapers. What's a researcher to do?

Prowl local libraries in search of information from literally thousands of books, magazine and newspaper articles, and, of course, the johnny-come-lately, the Internet. We weighed facts and made judgment calls. Sure, standard references like the *Columbia Encyclopedia*, *Encyclopaedia Britannica*, *Funk & Wagnalls*, and *World Book* were great. We couldn't have written this book without them. We even turned to our well-worn copy of *Britannica's* eleventh edition, published in 1910. It was absolutely no use in flushing out entries on atomic warfare, rocket science, lasers, or pop art, but we liked its slant in long essays written by revered historians about the first nine-tenths of the millennium. But even the most up-to-date *Britannica* missed Zaharias's real birth date (1911—see Susan E. Cayleff, *Babe: The Life and Legend of Babe Didrickson Zaharias*. Urbana: University of Illinois Press, 1995) by three years and didn't even give a passing reference to Marion Donovan, the woman we decided invented the first crude version of a disposable diaper. (See *World of Invention: History's Most Significant Inventions and the People Behind Them*. Detroit: Gale Research Co., 1994.)

The Dictionary of National Biography, *The Dictionary of American Biography*, *The Dictionary*

of Literary Biography, and *Current Biography* supplemented the old standards. *The New York Times* obituary index and its personal name index also provided information about people who lived in the last century and a half.

Still, we wanted to move beyond usual reference materials to pinpoint obscure inventions (like the phonograph record), credit important trends, and ensure cultural diversity. That's where books like the multivolume *Biographical Dictionary of Scientists* (David Abbott, ed., New York: Peter Bedrick Books, 1986) and the earlier series, *Dictionary of Scientific Biography* (Charles Coulston Gillispie, ed., New York: Charles Scribner's Sons, 1975) came in handy. So, too, did the myriad encyclopedias that focused on specific countries and regions, including *Japan: An Illustrated Encyclopedia* (Tokyo: Kodansha, 1993); *The Cambridge Encyclopedia of China* (Brian Hook, ed., Cambridge: Cambridge University Press, 1991).

We discovered dictionaries and encyclopedias on almost every imaginable subject, from revered scientists (*Nobel Prize Winners*, Tyler Wasson, ed., New York: H.W. Wilson, 1987), to holy rollers (*Dictionary of Saints*, by John J. Delaney, Garden City, N.Y.: Doubleday, 1980),

Selected Bibliography

to nouvelle cuisine (*The Food Chronology*, by James Trager, New York: Henry Holt, 1995).

Books like *Notable American Women, 1607-1950: A Biographical Dictionary* (Edward T. James, ed., Cambridge, Mass.: Belknap Press of Harvard University, 1971), its companion volume, *Notable American Women: The Modern Period* (Barbara Sicherman and Carol Hurd Green, eds., Cambridge, Mass.: Belknap Press of Harvard University, 1980), and the *Great Lives in History* series (Frank N. Magill, ed., Pasadena, Calif.: Salem Press) were especially helpful in unearthing obscure facts about people omitted from standard encyclopedias or given only a paragraph. That's how, little by little, we made sure that our book represents a more diverse public than standard reference works on most library shelves.

During the two years spent on research and writing this book, the Internet emerged as an important tool for historians, as the National Archives, the Library of Congress, and virtually every important research facility in the English-speaking world began posting their catalogs and

collections on home pages. Just as the printed book changed the course of research and study in the fifteenth century, the Internet is poised to reshape the discipline of historical research for the next millennium. Home pages for the National Inventors Hall of Fame, the National Women's Hall of Fame, and other organizations helped us in our search for the millennium's top dogs.

So, if we've whetted your appetite for these 1,000 superstars, there's plenty of reading material to supplement our facts. Some of it is slow going, like Christine de Pisan's rambling 1405 tome, *The Book of the City of Ladies* (reprinted, New York: Persea Books, 1982); others, like *The Guinness Book of World Records* (Mark C. Young, ed. Stamford, Conn.: Guinness Media, 1997) or *The Quotable Woman* (by Elaine Partnow, New York: Facts on File, 1982), are fun to skim.

It would be unwieldy to list our thousands of references, so we've left out most of the biographies we consulted during this two-year odyssey. Still, we wanted to give you a taste of some of the especially useful material we unearthed along the way.

- Amberg, George. *From the New York Times Film Reviews, 1913-1970*. New York: Arno Press, 1971.
- Ambrose, Stephen. *Undaunted Courage*. New York: Simon & Schuster, 1996.
- Aveni, Gregory. *Empires of Time*. New York: Basic Books, 1989.
- Bailleux, Nathalie, et al. *The Book of Chocolate*. Paris: Flammarion, 1995.
- Barr, Roger. *The Importance of Malcolm X*. San Diego: Lucent Books, 1994.
- Beasley, W. G. *The Rise of Modern Japan*. New York: St. Martin's Press, 1990.
- Bissell, Richard. *You Can Always Tell a Harvard Man*. New York: McGraw-Hill, 1962.

- Bliss, Michael. *The Discovery of Insulin*. Chicago: University of Chicago Press, 1982.
- Boorstin, Daniel. *The Creators*. New York: Random House, 1992.
- . *The Discoverers*. New York: Random House, 1983.
- Bratton, Fred Gladstone. *A History of the Bible*. Boston: Beacon Press, 1959.
- Bromberger, Merry, and Serge Bromberger. *Jean Monnet and the United States of Europe*. New York: Coward-McCann, 1968.
- Buchholz, Todd G. *New Ideas from Dead Economists*. New York: Penguin Books, 1989.
- Cantor, Norman. *The Civilization of the Middle*

Selected Bibliography

- Ages*. New York: HarperCollins, 1993.
- Cardwell, Donald. *The Norton History of Technology*. New York: W.W. Norton, 1995.
- Carman, W. Y. *A History of Firearms*. London: Routledge & Kegan Paul, 1955.
- Carson, Rachel. *Silent Spring*. Boston: Houghton Mifflin, 1962.
- Caruso, John Anthony. *The Liberators of Mexico*. New York: Pageant Press, 1954.
- Christianson, Gale E. *Edwin Hubble: Mariner of the Nebulae*. New York: Farrar, Straus & Giroux, 1996.
- Churchill, Winston. *A History of the English Speaking Peoples*. New York: Dodd Mead & Co., 1956.
- Ciotti, Paul. "Revenge of the Nerds." *California* (July 1982), pp. 73-74, 128-134.
- Clard, William H., and James H. S. Moynahan. *Famous Leaders of Industry*. Boston: L.C. Page, 1955.
- Clark, William R. *Explorers of the World*. New York: Natural History Press, 1964.
- Colacello, Bob. *Holy Terror: Andy Warhol Close Up*. New York: HarperCollins, 1990.
- Coleman, Elizabeth Ann. *The Opulent Era: Fashions of Worth, Doucet and Pingat*. New York: Thames and Hudson, 1990.
- Commager, Henry Steele, ed. *Documents of American History*. New York: Appleton-Century-Crofts, 1963.
- Creighton, Donald. *A History of Canada*. Boston: Houghton Mifflin, 1958.
- Cuddihy, John Murray. *The Ordeal of Civility*. New York: Basic Books, 1974.
- Cunliffe, Marcus. *The American Heritage History of the Presidency*. New York: American Heritage, 1968.
- Daniel, Glyn. *A Short History of Archaeology*. London: Thames and Hudson, 1981.
- Danzig, Allison, and Joe Reichler. *The History of Baseball*. Englewood Cliffs, N.J.: Prentice-Hall, 1959.
- Day, Lance, and Ian McNeil, eds. *Biographical Dictionary of the History of Technology*. London: Routledge Reference, 1996.
- de Pizan, Christine. *The Book of the City of Ladies*. New York: Persea Books, 1982.
- Duffy, Maureen. *The Passionate Shepherdess: Aphra Behn 1640-89*. New York: Avon Books, 1977.
- Durkin, Tish. "The UN-Candidate." *New York Times Magazine*, 20 October 1996, p. 48.
- Einstein, Alfred. *A Short History of Music*. New York: Alfred Knopf, 1969.
- Fadiman, Clifton, ed. *The Little, Brown Book of Anecdotes*. Boston: Little, Brown, 1985.
- . *The Lifetime Reading Plan*. New York: Harper & Row, 1960.
- Fairbank, John King. *China: A New History*. Cambridge: Harvard University Press, 1992.
- Farber, Eduard, ed. *Great Chemists*. New York: Interscience Publishers, 1961.
- Feldman, Anthony, and Peter Ford. *Scientists and Inventors*. New York: Facts on File, 1979.
- Ferguson, Donald. *A History of Musical Thought*. New York: Appleton-Century-Crofts, 1948.
- FitzGerald, Edward, trans. *Rubaiyat of Omar Khayyam: The Astronomer Poet of Persia*. Mount Vernon, N.Y.: Golden Eagle Press, 1938.
- Forbes, Malcolm, with Jeff Bloch. *Women Who Made a Difference*. New York: Simon & Schuster, 1990.
- "Friendly Medicine." *Time*, 7 August 1989, p. 39.
- Galas, Judith C. *Gay Rights*. San Diego: Lucent, 1996.
- Garraty, John A., and Peter Gay. *The Columbia History of the World*. New York: Harper & Row, 1972.
- Geneen, Harold, with Brent Bowers. *The Synergy Myth*. New York: St. Martin's Press, 1997.
- Gilbert, Martin. *The First World War: A Complete*

Selected Bibliography

- History*. New York: Henry Holt, 1994.
- Gilbreth, Frank B., Jr., and Ernestine Gilbreth Carey. *Cheaper by the Dozen*. New York: Thomas Y. Crowell, 1948.
- Gottlieb, Agnes Hooper. *Women Journalists and the Municipal Housekeeping Movement*. Ph.D. diss., University of Maryland, 1992.
- Gottlieb, Sidney, ed. *Hitchcock on Hitchcock*. Berkeley: University of California Press, 1995.
- Gillespie, Charles C. *Dictionary of Scientific Biography*. New York: Charles Scribner's Sons, 1973.
- Gorn, Elliot. *The Manly Art: Bare-Knuckle Prize Fighting in America*. Ithaca: Cornell University Press, 1986.
- Greenhouse, Linda. "Thurgood Marshall, Civil Rights Hero, Dies at 84." *New York Times*, 25 January 1991, p. 1.
- Greenslade, S. L. *The Cambridge History of the Bible*. Cambridge: University Press, 1961.
- Griffiths, Paul. *A Concise History of Avant-Garde Music*. New York: Oxford, 1978.
- Grimm, Harold J. *The Reformation Era, 1500-1650*. New York: Macmillan, 1973.
- Gussow, Mel. "Olivier Is Dead After 6-Decade Acting Career." *New York Times*, 12 July 1989, p. 1.
- Gustaitis, Joseph. "E.R. Squibb: Pharmaceutical Pioneer." *American History* 26, no. 2 (May/June 1991), pp. 36-37.
- Haber, Louis. *Black Pioneers of Science & Invention*. New York: Harcourt, Brace & World, 1970.
- Harris, Ann Sutherland, and Linda Nochlin. *Women Artists: 1550-1950*. New York: Alfred A. Knopf, 1976.
- Harris, Leon. *Merchant Princes: An Intimate History of Jewish Families Who Built Great Department Stores*. New York: Harper & Row, 1977.
- Harrison, Barbara Grizzuti. "The First Weight Watcher." *McCall's* (September 1981), pp. 26-28, 142.
- Hendrickson, Robert. *The Grand Emporiums: The Illustrated History of America's Great Department Stores*. New York: Stein and Day, 1979.
- Hertsgaard, Mark. *A Day in the Life: The Music and Artistry of the Beatles*. New York: Delacorte, 1995.
- Hibbert, Christopher. *The House of Medici*. New York: William Morrow, 1975.
- Hickok, Ralph. *A Who's Who of Sports Champions*. Boston: Houghton Mifflin, 1995.
- Higginson, William J. *The Haiku Handbook*. New York: McGraw-Hill, 1985.
- Hochman, Gloria. *Heart Bypass: What Every Patient Must Know*. New York: St. Martin's Press, 1982.
- Honour, Hugh. *Cabinet Makers and Furniture Designers*. New York: G.P. Putnam's Son, 1969.
- "The Hotel Ritz: Paris' Resplendent Landmark on the Place Vendome." *Architectural Digest* 46 (September 1980), pp. 120-24, 174.
- Howe, Russell Warren. *Mata Hari: The True Story*. New York: Dodd, Mead, 1986.
- Hsia, C. T. *A History of Chinese Fiction: 1917-1957*. New Haven: Yale University Press, 1961.
- Hubben, William. *Four Prophets of Our Destiny*. New York: Macmillan, 1954.
- Janssen, Wallace F. "The Squad That Ate Poison." *FDA Consumer* (December 1981-January 1982), pp. 6-11.
- Jeal, Tim. *The Boy-Man: The Life of Lord Baden-Powell*. New York: William Morrow, 1990.
- Johansson, Warren, and William A. Percy. *Outing: Shattering the Conspiracy of Silence*. New York: Haworth, 1994.
- "John H. Hammond Jr. Dies; Electronics Inven-

Selected Bibliography

- tor Was 76." *New York Times*, 14 February 1965, p. 88.
- Johnes, Raymond. *Japanese Art*. London: Spring Books, 1961.
- Johnson, Paul. *Intellectuals*. New York: Harper & Row, 1988.
- Johnson, Stephen L. *The History of Cardiac Surgery, 1896-1955*. Baltimore: Johns Hopkins, 1970.
- Kalman, Laura. "Mr. Civil Rights." *New York Times*, 7 February 1993, sec. 7 (Book Review), p. 14.
- Katz, Victor. *A History of Mathematics*. New York: HarperCollins, 1993.
- Kaufman, Martin. *Homeopathy in America: The Rise and Fall of a Medical Heresy*. Baltimore: Johns Hopkins, 1971.
- Keen, Benjamin, ed. *Latin American Civilization*. Boulder: Westview Press, 1986.
- Kiry, Richard, Sidney Withington, Arthur Burr, and Frederick Gridley Kilgour. *Engineering in History*. New York: McGraw-Hill, 1956.
- Kisselgoff, Anna. "Martha Graham Dies at 96; A Revolutionary in Dance." *New York Times*, 2 April 1991, p. 1.
- Kleinknecht, William. *The New Ethnic Mobs*. New York: The Free Press, 1996.
- Kluger, Richard. *Ashes to Ashes*. New York: Alfred A. Knopf, 1996.
- Kobler, John. *Ardent Spirits: The Rise and Fall of Prohibition*. New York: G.P. Putnam's Sons, 1973.
- Koegler, Horst. *The Concise Oxford Dictionary of Ballet*. London: Oxford, 1977.
- Kotz, Samuel, and Norman Johnson, eds. *Encyclopedia of Statistical Sciences*. New York: John Wiley & Sons, 1985.
- Krebs, Albin. "John Ford, the Movie Director Who Won 5 Oscars, Dies at 78." *New York Times*, 1 September 1973, p. 1.
- Kroc, Ray. *Grinding It Out: The Making of McDonald's*. Chicago: Henry Regnery Company, 1977.
- Kronenberger, Louis, ed. *Brief Lives: A Biographical Companion to the Arts*. Boston: Little, Brown, 1965.
- Labaton, Stephen. "Thousands Fill Cathedral to Pay Tribute to Marshall." *New York Times*, 29 January 1991, p. 16.
- "Langston Hughes, Writer, 65, Dead." *New York Times* 23 May 1967, p. 1.
- Lash, Joseph P. *Eleanor and Franklin*. New York: Signet, 1971.
- Leavitt, Judith Walzer. *Typhoid Mary: Captive to the Public Health*. Boston: Beacon Press, 1996.
- Levy, Reuben. *An Introduction to Persian Literature*. New York: Columbia University Press, 1969.
- Li, Dun J. *The Ageless Chinese*. New York: Charles Scribner's Sons, 1965.
- Lives in Science: A Scientific American Book*. New York: Simon & Schuster, 1957.
- Lockie, Dr. Andrew, and Dr. Nicola Geddes. *Homeopathy: The Principles and Practice of Treatment*. London: Dorling Kindersley, 1995.
- Lockwood, Luke Vincent. *Colonial Furniture in America: The Illustrated History of a Great Period of Craftsmanship*. New York: Castle, 1951.
- Love, John F. *McDonald's: Behind the Arches*. New York: Bantam, 1995.
- Lynch, Patrick, and John Viazey. *Guinness's Brewery in the Irish Economy, 1759-1876*. Cambridge: Cambridge University Press, 1960.
- Mackey, Sandra. *The Iranians*. New York: Dutton, 1996.
- Mann, Charles C., and Mark L. Plummer. *The Aspirin Wars: Money, Medicine, and 100 Years of Rampant Competition*. New York: Alfred A. Knopf, 1991.

Selected Bibliography

- Mason, Penelope. *History of Japanese Art*. New York: Harry Abrams, 1993.
- McGreal, Ian P., ed. *Great Thinkers of the Western World*. New York: HarperCollins, 1992.
- McKenzie, A.E.E. *The Major Achievements of Science*. Cambridge: Cambridge University Press, 1960.
- McNamara, Jo Ann Kay. *Sisters in Arms: Catholic Nuns Through Two Millennia*. Cambridge, Mass.: Harvard University Press, 1996.
- McNaughton, William, ed. *Chinese Literature*. Rutland, Vt.: Charles E. Tuttle, 1974.
- Messadie, Gerald. *Great Inventions Through History*. Edinburgh: Chambers, 1991.
- Moquin, Wayne, with Charles Van Doren. *The American Way of Crime: A Documentary History*. New York: Praeger, 1976.
- Morgan, Judith, and Neil Morgan. *Dr. Seuss & Mr. Geisel*. New York: Random House, 1995.
- Morison, Samuel Eliot. *Admiral of the Ocean Sea*. Boston: Little, Brown, 1946.
- . *The Discovery of America: The Southern Voyages*. New York: Oxford University Press, 1974.
- Nast, Thomas. *Thomas Nast's Christmas Drawings*. New York: Dover Publications, 1978.
- Okker, Patricia. *Our Sister Editors: Sarah J. Hale and the Tradition of Nineteenth-Century American Women Editors*. Athens: University of Georgia, 1995.
- O'Neill, Hugh B. *Companion to Chinese History*. New York: Facts on File, 1987.
- Patota, Anne. "A First Day at Harvard." *Stamps*, 20 August 1986, pp. 22-23.
- Peppard, Murray B. *Paths Through the Forest: A Biography of the Brothers Grimm*. New York: Holt, Rinehart and Winston, 1971.
- Post, Edwin. *Truly Emily Post*. New York: Funk & Wagnalls, 1961.
- Raeburn, Michael, and Alan Kendall, eds. *Heritage of Music*. New York: Oxford University Press, 1989.
- Raven, Susan, and Alison Weir. *Women of Achievement: Thirty-five Centuries of History*. New York: Harmony, 1981.
- Reid, T. R. *The Chip*. New York: Simon & Schuster, 1984.
- Reyna, Ferdinando. *A Concise History of Ballet*. New York: Grosset & Dunlap, 1964.
- Robertson, James A. *A History of Chile*. New York: Russell & Russell, 1964.
- Robinson, Jackie. *I Never Had It Made*. New York: G.P. Putnam's Sons, 1972.
- Rowse, A. L. *The Elizabethan Renaissance: The Life of Society*. New York: Charles Scribner's Sons, 1971.
- Runciman, Steven. *A History of the Crusades*. London: Cambridge University Press, 1951.
- Russell, Bertrand. *A History of Western Philosophy*. New York: Simon & Schuster, 1945.
- Russell, Francis. *The Horizon Concise History of Germany*. New York: American Heritage, 1973.
- Schwartz, Bernard. *The Roots of Freedom: A Constitutional History of England*. New York: Hill and Wang, 1967.
- Shipp, Horace. *The Flemish Masters*. New York: Philosophical Library, 1954.
- Shorter, Edward. *A History of Women's Bodies*. New York: Basic Books, 1982.
- Smith, Adam. *An Inquiry into the Nature and Causes of the Wealth of Nations*. New York: Random House, 1937.
- Smith, Vincent A. *The Oxford History of India*. Oxford: Oxford University Press, 1958.
- Steinberg, S. H. *Five Hundred Years of Printing*. New York: Criterion Books, 1959.
- Strasberg, Lee. *A Dream of Passion: The Development of the Method*. Boston: Little, Brown and Co., 1987.

Selected Bibliography

- Swan, Peter C. *Chinese Painting*. New York: Universe Books, 1958.
- Sykes, Percy. *History of Persia*. London: Macmillan, 1921.
- Talbott, John H. *A Biographical History of Medicine*. New York: Grune & Stratton, 1970.
- Taylor, Henry Osborn. *The Medieval Mind*. Cambridge: Harvard University Press, 1962.
- Taylor, Stephen. *Shaka's Children: A History of the Zulu People*. London: HarperCollins, 1994.
- Thomsen, Robert. *Bill W.* New York: Harper & Row, 1975.
- Townes, Charles. "Harnessing Light." *Science* 84 (November 1984), pp. 153-55.
- Turner, Roland, and Stevin Goulden. *Great Engineers and Pioneers in Technology*. New York: St. Martin's Press, 1981.
- Uglow, Jennifer, ed. *The International Dictionary of Women's Biography*. New York: Continuum, 1982.
- Usher, Abbott Payson. *History of Mechanical Inventions*. Cambridge: Harvard University Press, 1954.
- Walesa, Lech. *The Struggle and the Triumph: An Autobiography*. New York: Arcade, 1991.
- Walker, Paul Robert. *The Italian Renaissance*. New York: Facts on File, 1995.
- Watson, Robert. *The Great Psychologists*. Philadelphia: J.B. Lippincott, 1968.
- Wechsberg, Joseph. *The Merchant Bankers*. Boston: Little, Brown, 1966.
- Weisberger, Bernard A. "Doctor Wiley and His Poison Squad." *American Heritage* (February/March 1996), pp. 14-15.
- White, Barbara Ehrlich. *Impressionists Side by Side*. New York: Alfred A. Knopf, 1996.
- Whittaker, Edmund. *Schools and Streams of Economic Thought*. Chicago: Rand McNally, 1960.
- Zimmerman, Leo M., and Ilza Veith. *Great Ideas in the History of Surgery*. New York: Dover, 1967.

Index

Numbers in **boldface** refer to main entry rankings.

Abbas I, King, 706
 Abelard, Peter, 172
 abolitionism, 24, 72, 137, 218, 244
 abstraction, 135-36, 235, 238, 252
 acting, 46-47, 139-40, 148, 238, 247, 277-78, 281, 285-86, 288-89, 298
 Adams, Abigail, 563
 Adams, John, 214, 42, 56, 85, 87, 169
 Adams, John Quincy, 65, 169
 Adams, Samuel, 263, 65
 Addams, Jane, 209
 Adenauer, Konrad, 431
 Adler, Alfred, 6
 advertising, 28, 293
 Afghanistan, 45, 46, 48, 170
 Africa, 38, 46, 58, 63, 66, 85, 88, 97, 105, 106-7, 114, 118, 122, 148, 161-62, 166, 200-201, 202, 207, 208, 218, 221, 233, 263-64, 265, 281, 282, 286, 287, 296
 African National Congress, 161, 162
 Age of Reason, 3
 Agnesi, Maria, 491; *Analytical Institutions for the Use of Italian Youth*, 147
 AIDS, 136, 282, 296
 air travel, 8, 31, 32, 156, 192, 194, 212-13, 245, 247
 Akbar, 148, 27, 256
 Albert, Prince of England, 27
 Alberti, Leon Battista, 813
 Albuquerque, Afonso de, 883
 alcohol, 114, 203, 207, 250, 284

Alcoholics Anonymous, 114
 Alcott, Louisa May, 372; *Little Women*, 111, 112
 Aldrin, Buzz, 208
 Alexander, Czar of Russia, 268
 Alexander Nevsky, 737, 242
 Alexander VI, Pope, 92
 Alfonso X, King of Spain, 722
 Ali, Muhammad, 681, 61
 Allen, Woody, 287
 Alp Arslan, 517
 Amazon, 163
 American Federation of Labor, 198, 272
 American Indians, 164, 198-99, 301
 American Revolution, 8, 17, 20, 54, 57, 71, 79, 152, 169, 255
 American Tobacco Company, 133
 Amina, 955
 Ampère, André-Marie, 409
 analytic geometry, 8-9
 anarchism, 122, 195, 265, 285
 Andersen, Hans Christian, 550
 anesthesia, 212
 Angkor Thom, 253
 Anglicanism, 274
 Anglo-Dutch War, 118
 Anielewicz, Mordecai, 773
 animation, 148
 Anne of Cleves, 29
 Anthony, Susan B., 139, 25
 Anthony of Padua, 595
 anthropology, 113-14, 223, 256
 antibiotics, 17, 204
 antiseptics, 37-38
 apartheid, 106-7, 161-62, 281
 Apgar, Virginia, 971
 Apgar test, 291

Appert, Nicolas, 200
 Apple computer, 215
 Aquinas, Thomas, 8, 40, 49, 125, 219; *Summa Theologica*, 4
 Arabian Nights, 117, 118
 Arafat, Yasir, 498
 archaeology, 216, 232-33
 architecture, 25, 26-27, 41, 47, 48, 72, 77-78, 94, 109, 132-33, 134, 139, 141, 143, 160, 178, 193, 230-31, 245
 Arden, Elizabeth, 185
 Arendt, Hannah, 913; *Eichmann in Jerusalem*, 275
 Argentina, 98, 144, 190, 217, 226, 283
 Aristotle, 3, 15, 33, 40, 43, 49, 52, 219
 Armstrong, Louis, 322, 297
 Armstrong, Neil, 696
 Armstrong, William, 94
 Arnold, Matthew, 548; *Culture and Anarchy*, 285
 Ar-Razi, Fakr ad-Din, 152
 art, 4, 5, 14-15, 22, 39-40, 45, 48, 53, 55-56, 58, 59, 67, 69, 72, 77, 78, 80-81, 84, 87-88, 92, 97, 100, 101, 103, 109, 115, 122, 129, 135-36, 140, 143, 144, 155, 156-57, 163, 164, 168, 170, 176, 183, 188-89, 197, 19, 201, 209, 218, 21, 227, 229, 234-35, 237, 238, 246, 252, 260-61, 264, 267-68, 279, 299; *see also specific artists*
 aspirin, 248-49
 Astaire, Fred, 141, 257
 Astor, John Jacob, 529
 astronomy, 2-3, 7, 11, 62, 79, 101, 135, 171-72, 187, 217, 225-26, 278
 Atanasoff, John V., 23

Index

Atatürk, Kemal, 181
 Atlas, Charles, 668
 atomic bomb, 24, 64, 118, 145, 215, 262
 Auden, W. H., 157
 Audubon, John James, 672; *The Birds of America*, 201
 Austen, Jane, 168; *Emma*, 50; *Pride and Prejudice*, 50; *Sense and Sensibility*, 50
 Australia, 58
 Austria, 36, 47, 53, 65, 79-80, 82, 87, 107, 191, 212
 automobiles, 16, 31, 32, 43, 82, 139, 153, 289
 Averroës (Ibn Rushd), 164
 Aztecs, 45

 Babbage, Charles, 351, 288
 Babur, 92
 Bach, Johann Sebastian, 35, 220, 256; *St. Matthew Passion*, 11
 Bacon, Francis, 84, 40, 43, 84, 230; *Essays*, 25
 Bacon, Roger, 412, 49
 bacteriology, 64-65, 75
 Baden-Powell, Robert, 789
 Baekeland, Leo Hendrik, 284
 Bakunin, Mikhail, 401
 ballet, 68, 74, 93, 123, 144, 166-67, 252, 289
 Ballets Russes, 123, 252
 Balzac, Honoré de, 254, 92, 128, 176; *The Human Comedy*, 76
 Bangladesh, 237
 banking, 78-79, 291-92, 294
 Bank of America, 294
 Bannister, Roger, 963, 61
 Banting, Frederick Grant, 462
 barbed wire, 204
 Bardeen, John, 710, 211
 Baring, Francis, 973
 Barnard, Christiaan, 65
 Barnum, Phineas T., 94, 79, 224
 Barth, Karl, 910; *Church Dogmatics*, 274
 Bartholomaeus Anglicus, 570; *On the Nature of Things*, 171
 Barton, Clara, 289
 baseball, 61, 108, 133, 203, 245, 302
 basketball, 61, 87, 272
 battery, 128
 Baudelaire, Charles-Pierre, 633, 921
Flowers of Evil, 191
 Bauhaus, 109, 136

Baybars I, 497
 Bayezid, 697
 Beagle, H.M.S., 3
 Beatles, 99
 Beauchamp, Pierre, 307
 Beau de Rochas, Alphonse, 31, 32
 Beaujoyeux, Balthasar de, 223; *Ballet Comique de la Reine*, 68
 Beaumont, Gustave de, 184
 Beauvoir, Simone de, 573; *The Second Sex*, 172
 Beccaria, Cesare, 474; *An Essay on Crimes and Punishments*, 142
 Becket, Thomas, 108
 Beckett, Samuel, 927; *Waiting for Godot*, 279
 Beecher, Henry Ward, 69
 beer, 284
 Beethoven, Ludwig van, 10, 1, 11, 99, 103; *Fidelio*, 4; *Ninth Symphony*, 5
 Begin, Menachem, 267
 Behaim, Martin, 556
 behaviorism, 37, 73
 Behn, Aphra, 393
 Behrens, Peter, 928
 Behring, Emil von, 220, 75
 Belgium, 101
 Bell, Alexander Graham, 74, 183, 188, 205, 266
 Bellini, Giovanni, 403
 Bello, Andrés, 334
 Bell Telephone Company, 22
 Benedict, Ruth, 114, 223
 Ben-Gurion, David, 312
 Bennett, James Gordon, 641
 Bentham, Jeremy, 383, 24, 87, 101
 Bentley, Eric, 50
 Benz, Carl, 140, 31
 Berenson, Bernard, 103
 Bergman, Ingmar, 958, 50
 Bergson, Henri, 890, 18; *Creative Evolution*, 266
 Berkeley, George, 341
 Berlin, Irving, 469, 103, 297
 Berlioz, Hector, 671, 40, 128, 186; *Symphonie Fantastique*, 201
 Bernadette of Lourdes, 390, 126
 Bernard of Clairvaux, 255
 Bernays, Edward, 79
 Bernhardt, Sarah, 154
 Bernini, Gianlorenzo, 238, 160
 Bernstein, Eduard, 745; *Evolutionary Socialism*, 224

Bessel, Friedrich Wilhelm, 750
 Bessemer, Henry, 326
 Bible, 1, 21, 25, 28, 102, 114, 141, 169, 177, 274, 286; Gutenberg, 1; King James Version, 263, 274
 bicycle, 116
 Bierce, Ambrose, 172, 227
 big bang theory, 202
 Biko, Stephen, 933
 biochemistry, 136
 biotechnology, 185
 Bird, Larry, 272
 birds, 201-2
 Birdseye, Clarence, 373
 birth control, 29, 93, 216, 265
 Bismarck, Otto von, 118, 18, 68, 223
 Bjerknes, Vilhelm, 236
 Blackbeard, 683
 Blackstone, William, 292; *Commentaries on the Laws of England*, 87
 Blackwell, Antoinette Louisa
 Brown, 267, 69
 Blackwell, Elizabeth, 227
 Blake, William, 315
 Blanche of Castile, 694, 18,
 blindness, 92-93, 287
 blood circulation, 15
 blood preservation, 290
 blood types, 259
 Bloomer, Amelia Jenks, 500
 bloomers, 149
 Bloomsbury group, 133
 blue jeans, 162-63
 blues music, 230, 265
 Boas, Franz, 114, 223
 Boccaccio, Giovanni, 321; *Decameron*, 97
 Bodin, Jean, 7
 Boer War, 254, 264
 Bogart, Humphrey, 286
 Bohr, Niels, 208
 Boleyn, Anne, 256
 Bolívar, Simón, 48, 101, 176, 190, 255
 Bolivia, 15, 283
 Bolshevik Revolution, 13
 Bonaventure, 860
 Bonhoeffer, Dietrich, 636, 181
 Boniface VIII, Pope, 837, 185, 191; *Unam Sanctum*, 251
 Bonnard, Pierre, 657; *Circus Horse*, 197; *Nude at her Toilette*, 197
 Boole, George, 147; *An Investigation of the Laws of Thought*, 45
 Boone, Daniel, 164

Index

- Booth, Hubert, 991
 Borel, Jean-François, 434
 Borges, Jorge Luis, 483
 Borgia, Cesare, 13
 Borlaug, Norman, 285
 Borromini, Francesco, 530
 Bosch, Hieronymus, 199
Boston Gazette, 79
 Boswell, James, 397, 54; *The Life of Samuel Johnson*, 119
 botany, 29, 124, 193
 Botticelli, Sandro, 331, 69, 92; *The Birth of Venus*, 100; *Primavera*, 100
 Boucicaut, Aristide, 418, 121
 Boudin, Eugène, 58
 Bourke-White, Margaret, 548
 boxing, 204, 207
 Boyle, Robert, 142; *Essay of Men's Great Ignorance of the Uses of Natural Things*, 43
 Boy Scouts, 236
 Bracton, Henry de, 805
 Bradbury, Ray, 157
 Brady, Mathew, 428
 Brahe, Tycho, 202, 11, 217
 Brahms, Johannes, 353, 173
 Braille, Louis, 956, 81
 Bramah, Joseph, 990
 Bramante, Donato, 258, 237
 Brancusi, Constantin, 363; *Bird in Space*, 109
 Brando, Marlon, 140
 Brazil, 200, 233, 252
 Briggs, A.D.P., 100
 British Broadcasting Corporation, 28
 Brontë, Charlotte, *Jane Eyre*, 158
 Brontë, Emily, 522; *Wuthering Heights*, 157, 158
 Brooklyn Bridge, 134
 Brooklyn Dodgers, 133
 Brown, Louise, 784
 Browning, Elizabeth Barrett, 759, 184; *Sonnets from the Portuguese*, 228
 Browning, Robert, 608, 228; *The Ring and the Book*, 184
Brown v. Board of Education, 105
 Bruegel the Elder, Pieter, 256, 59; *The Census at Bethlehem*, 77; *Wedding Dance*, 77
 Brunelleschi, Filippo, 85, 48, 97
 Bryan, William Jennings, 911
 Buber, Martin, 723, 130, 158; *I and Thou*, 218
 Buddhism, 27, 122-23, 178, 209, 231
 Buffett, Warren, 889
 Bunin, Ivan, 11
 Bunyan, John, 391; *Pilgrim's Progress*, 117
 Burbank, Luther, 665
 Burke, Edmund, 180; *Reflections on the French Revolution*, 54
 Burr, Aaron, 56, 57, 86
 Burton, Richard Francis, 392
 Bushnell, David, 798
 business, see specific businesses and business figures
 bypass surgery, 213
 Byron, Lord, 385, 88, 154, 242; *Don Juan*, 115
 Byzantine Empire, 156, 173
 Caesar Augustus, 70, 283
 calculus, 26, 44
 Calder, Alexander, 783
 calendar, modern, 242
 Calvin, John, 69, 164, 229, 243; *The Institutes of the Christian Religion*, 21
 Cambodia, 122, 253, 283
 Cameron, Julia Margaret, 728
 Camus, Albert, 752; *The Plague*, 226; *The Stranger*, 226
 Canada, 197, 262-63, 265
 cancer research, 86-87, 136, 161
 canned food, 59
 Canterbury Cathedral, England, 178
 capitalism, 7-8, 21, 62, 72, 121, 125, 170, 207, 211, 224, 243, 266, 293
 Capone, Al, 158
 Caravaggio, 176; *Death of a Virgin*, 53
 Carlson, Chester, 688
 Carlyle, Thomas, 691, 21, 74, 119, 219, 267; *The French Revolution*, 207
 Carnegie, Andrew, 961
 Carothers, Wallace Hume, 413
 Carroll, Lewis, 845; *Alice's Adventures in Wonderland*, 254
 Carson, Rachel, 377; *Silent Spring*, 113
 Carter, Jimmy, 85
 Cartier-Bresson, Henri, 592
 cartography, 104-5
 Cartwright, Alexander, 814, 61
 Caruso, Enrico, 538
 Carver, George Washington, 410
 Casanova de Seingalt, Giovanni Giacomo, 520; *The History of My Life*, 157
 Cassatt, Mary, 755, 188
 Castro, Fidel, 466, 283
 Catherine de Médicis, 632, 68, 184, 255
 Catherine of Aragon, 852, 29, 141, 154
 Catherine the Great, 138
 catheter technology, 236
 cathode-ray tube, 51
 Catholicism, 2, 3, 4, 20, 21, 23-24, 25, 28, 29, 35-36, 53, 57, 59, 62, 77, 102, 103-4, 105, 113, 117, 128, 129, 139, 142, 145, 146, 159, 164, 174, 178, 184, 189, 196, 197, 231-32, 251-52, 256, 268, 274, 285
 Catholic Worker movement, 196
 CAT scan, 162
 Cavendish, Henry, 448
 Cecil, William, 10
 Celestine V, Pope, 251, 252
 Cellini, Benvenuto, 541; *The Autobiography of Benvenuto Cellini*, 163
 cell theory, 220-21
 Celsius, Anders, 265
 centigrade thermometer, 79
 Cervantes, Miguel de, 44; *Don Quixote*, 14, 82
 Cézanne, Paul, 72, 188; *The Great Bathers*, 22
 Chain, Ernst, 17
 champagne, 250
 Champollion, J.-F., 216
 Chanel, Coco, 972, 271
 Chaplin, Charlie, 795, 123, 281, 288
 Chapman, John, 800
 Charlemagne, 283
 Charles I, King of England, 49, 193, 248, 261, 263
 Charles II, King of England, 5, 49, 110, 248
 Charles V, Holy Roman emperor, 61, 2, 46, 140, 146, 147
 Charles VII, King of France, 25
 Charles IX, King of France, 190
 Charles X, King of France, 279
 Chaucer, Geoffrey, 62, 135; *Canterbury Tales*, 19
 Chekhov, Anton, 192; *The Cherry Orchard*, 57; *The Three Sisters*, 57; *Uncle Vanya*, 57

Index

chemistry, 20, 23, 33-34, 42, 43, 76, 125, 187, 204, 248, 262
 chemotherapy, 75
 chess, 262
 Chiang Kai-shek, 455, 16
 Chicago Bulls, 272
 Ch'ien-lung, 461
 childhood development, 111, 291
 child education, 195, 259, 261, 273, 280
 child psychiatry, 189-90
 children's literature, 81-82, 254, 298
 Chile, 101, 145, 190
 China, 2, 14, 15-16, 18, 27-28, 32, 56, 69, 86, 87-88, 98, 100, 118-19, 127-28, 132, 137, 138, 154, 173, 177, 179, 188, 196, 222, 231, 262, 273, 282
 Ch'in Kuei, 119
 Chippendale, Thomas, 532; *The Gentleman and Cabinet Maker's Director*, 160
 chocolate, 249
 Chomsky, Noam, 912; *Syntactic Structures*, 275
 Chopin, Frédéric, 424
 Christianity, 2, 3, 4, 12-13, 20, 21, 23-24, 29, 35, 39, 49, 52, 57, 59, 69, 77, 82, 98, 102, 116, 120, 132, 139, 140, 141, 159, 164, 171, 178, 191, 196, 197, 222, 229-30, 234-35, 244-45, 258, 268, 273, 274, 285, 286, 294
 Christie, Agatha, 382; *Murder on the Orient Express*, 114
 Chu Hsi, 93, 231
 Churchill, Winston, 38, 1, 10, 36, 104, 130, 138, 214, 258
 Chu Yüan-chang, 60, 127
 Cid, El, 801
 cigarettes, 133
 Cinématographe, 134
 city planning, 141
 civil rights, 17, 24, 43, 62-63, 93, 106-7, 133, 137, 138, 161-62, 204, 247, 281, 284
 Civil War, U.S., 11, 24, 35, 86, 105, 110, 111, 129, 131, 155-56, 161, 227, 237, 250, 261, 281-82
 Clark, William, 153
 Clarke, Arthur C., 157
 Clausewitz, Carl von, 114, 268; *On War*, 35
 Clay, Henry, 172, 936

Cleaver, Eldridge, 122
 Clemenceau, Georges, 711, 92
 Clement IV, Pope, 125
 Clement VII, Pope, 464
 Clermont (boat), 74
 Clive, Robert, 869
 cloning, 186
 Cobbett, William, 919
 Coca-Cola, 294
 Cocteau, Jean, 49
 code cracking, 134
 Coen, Jan Pieterszoon, 339
 Coke, Edward, 282, 243
 Colbert, Jean-Baptiste, 294
 Coleridge, Samuel Taylor, 394, 100; *The Rime of the Ancient Mariner*, 118
 Colette, 721; *Gigi*, 217
 Columbus, Christopher, 2, 20, 32, 36, 38, 46, 72, 88, 122, 133, 167, 205, 301
 comedy, 52-53, 92, 97, 229, 238, 244, 286
 Common Market, 130-31
 communications satellites, 182-83
 Communism, 5-6, 12, 13, 15-16, 24, 41, 54, 62, 63, 71-72, 80, 86, 125-26, 129-30, 140, 145, 173, 177, 179, 186, 187, 188, 189, 204, 224, 238, 267, 274, 278, 283
 Comnena, Anna, 579; *The Alexiad*, 173
 compass, 32
 computers, 23, 45, 106, 134, 211, 215, 216, 219, 220, 287-88, 302
 Comte, Auguste, 130, 55, 165; *The Course of Positive Philosophy*, 40
 concrete, reinforced, 132-33
 Confucianism, 27, 56, 231
 Confucius, 27
 Congress, U.S., 85, 132, 145, 294
 Conrad, Joseph, 553, 167; *Heart of Darkness*, 166; *Lord Jim*, 166
 Constantinople, 23, 52, 123, 209
 Constitution, U.S., 5, 8, 17, 33, 80, 108
 Constitutional Convention, 8, 80
 consumer safety, 224
 Continental Congress, 65, 169
 Cook, James, 194, 142
 Coolidge, Calvin, 121, 225
 Copernicus, Nicholas, 18, 2, 3, 7, 11, 62, 187, 217, 251
 copiers, 206

Copland, Aaron, 965
 Cormack, Allan MacLeod, 162
 Corneille, Pierre, 561; *Le Cid*, 168
 Cornfeld, Bernard, 996
 cornflakes, 130
 Corot, Jean-Baptiste-Camille, 568; *Solitude*, 170
 Cortès, Hernán, 150
 cosmetics, 185
 Counter-Reformation, 128, 129, 285
 Courbet, Gustave, 560; *The Awakening*, 168
 Cousteau, Jacques, 685, 181
 Crane, Stephen, 754; *The Red Badge of Courage*, 226-27
 Cranmer, Thomas, 471
 Cray, Seymour, 715, 211
 Crazy Horse, 662
 Crick, Francis, 38
 Crimean War, 37
 criminal justice, 142, 280-81
 Crisis, *The*, 62
 Cristofori, Bartolomeo, 225
 Croly, Jane Cunningham, 930
 Cromwell, Oliver, 162, 16, 110
 Cromwell, Thomas, 29
 Crosby, Bing, 141
 Crusades, 20, 23, 77, 137, 156, 159, 173-74, 208, 209
 Cuba, 140, 162, 283
 Cuban missile crisis (1962), 140, 187, 214
 Cultural Revolution, 16
 Cunha, Euclides da, 778; *Rebellion in the Backlands*, 233
 Curie, Marie, 75, 288
 Curie, Pierre, 22
 Custer, General George, 199
 cyclosporine, 131
 da Gama, Vasco, 125, 32, 46, 122
 d'Agoult, Marie, 89
 Daguerre, Louis-Jacques-Mandé, 156
 daguerrotype, 47
 Daimler, Gottlieb, 275, 43
 Dali, Salvador, 735, 59, 252; *Persistence of Memory*, 221
 Dalton, John, 248
 dance, 68, 74, 93, 123, 166-67, 246, 252
 Dante Alighieri, 30, 217; *The Divine Comedy*, 10, 100, 251-52
 Danton, Georges, 247

Index

- Darío, Rubén, 564; *Profane Hymns*, 169
- Darwin, Charles, 7, 50, 81, 93, 155, 199, 200, 219, 223, 239; *The Origin of the Species*, 3-4, 239
- Daumier, Honoré, 587, 170, 264
- David, Jacques-Louis, 279
- Day, Dorothy, 653
- deafness, 92-93, 188, 209
- Debussy, Claude, 274, 54, 252; *Prelude to the Afternoon of a Faun*, 82
- decimals, 251
- Declaration of Independence, 5, 17, 19, 65, 94, 126, 136, 172
- Declaration of the Rights of Man (France), 33
- De Coubertin, Pierre, 743, 61
- Defoe, Daniel, 197, 205; *Moll Flanders*, 58; *Robinson Crusoe*, 58, 117
- Degas, Edgar, 482, 155, 164, 227
- de Gaulle, Charles, 459, 283
- deism, 229-30
- de Klerk, F. W., 107
- Delacroix, Eugène, 468, 128, 170; *Death of Sardanapalus*, 140; *Murder of the Bishop of Liège*, 140
- De Lesseps, Ferdinand, 421
- democracy, 5, 8, 33, 46, 53, 54, 184
- Demosthenes, 64
- Deng Xiaoping, 623
- Denmark, 36, 128, 221, 222
- d'Entragues, Henriette, 67
- department stores, 126
- De Pisan, Christine, 866; *The Book of Feats of Arms and Chivalry*, 259; *City of Ladies*, 260
- Depression, 12, 168, 182, 199, 222, 249, 272, 289
- Descartes, René, 25, 26, 40, 230; *Meditations*, 9
- d'Estaing, Valéry Giscard, 54
- De Valera, Eamon, 582
- Dewey, John, 872, 18
- Dewey, Thomas, 246
- Dewey Decimal System, 261
- diabetes, 138-39
- Diaghilev, Sergey, 838, 123
- Diana, Princess of Wales, 271, 298, 302
- Dias, Bartolomeu, 402
- Dickens, Charles, 70, 238, 277, 280; *A Christmas Carol*, 21; *David Copperfield*, 21; *Oliver Twist*, 21
- Dickinson, Emily, 479
- Diderot, Denis, 270; *Encyclopédie*, 81
- Disney, Walt, 494
- disposable diapers, 294
- Disraeli, Benjamin, 639, 281
- Dix, Dorothea, 873
- DNA, 31, 38, 186
- Dominic, 198, 142
- Dominicans, 59, 134
- Donatello, 319, 48
- Donne, John, 280, 217, 230
- Donovan, Marion, 983
- Dos Passos, John, U.S.A., 125
- Dostoyevsky, Fyodor, 771; *The Brothers Karamazov*, 23; *Crime and Punishment*, 23
- Douglass, Frederick, 791; *Narrative of the Life of Frederick Douglass*, 24
- Drake, Edwin, 835
- Drake, Francis, 257
- Drew, Charles, 967
- Dreyfus, Alfred, 65, 181, 183, 214
- Drucker, Peter, 703, 121, 142, 211; *Management*, 212
- drugs, see medicine and physiology; pharmaceutical industry; specific drugs
- Dryden, John, 366, 3
- Du Bois, W. E. B., 204, 138
- Duke, James Buchanan, 443, 121
- Dumas, Alexandre, 874, 46, 140, *The Three Musketeers*, 262
- Dumas, Alexandre, Jr., 168, 262; *Camille*, 262
- Du Mont, Allen, 169
- Duncan, Isadora, 554, 74, 78
- Duns Scotus, John, 635
- Du Pont, 125
- Dürer, Albrecht, 186; *Four Horsemen of the Apocalypse*, 56
- Duse, Eleanora, 47
- Dutch East India Company, 102
- Dutch independence, 146
- Dvořák, Antonín, 676; *New World Symphony*, 203
- Dylan, Bob, 888, 230
- dynamite, 66
- Earhart, Amelia, 704
- Eastman, George, 487, 85, 121
- Eckehart, Johannes, 338
- Eckert, John, 76, 1
- economics, 8, 39, 62, 76, 79, 81, 87, 130-31, 145, 167-68, 188, 198, 203-4, 211, 217, 220, 222, 291-92, 294, 298
- Edison, Thomas Alva, 28, 64, 248, 266
- editing, 249
- education, 96, 137-38, 195, 209, 229, 259, 261, 273, 280
- Edwards, Jonathan, 787
- Edwards, Robert, 235
- Edward II, King of England, 236
- Edward VII, King of England, 296
- Egypt, 39, 51, 52, 149, 254, 258, 264
- Ehrlich, Paul, 250
- Eichmann, Adolf, 275, 284
- Einstein, Albert, 17, 1, 3, 40, 41, 63, 64, 75, 190, 215, 268
- Eisai, 596
- Eisenhower, Dwight D., 374, 104, 250, 272
- Eleanor of Aquitaine, 420, 39, 108, 126, 208
- Electrical Numerical Integrator and Computer (ENIAC), 23
- electricity, 9-10, 34, 37, 124, 128, 152, 225
- electromagnetic radiation, theory of, 63
- electromagnetic telegraph, 183
- elementary school, 259
- elevators, 93-94
- El Greco, 283, 56; *The Burial of the Count of Orgaz*, 84
- Elion, Gertrude, 454
- Eliot, George, 184; *Middlemarch*, 55
- Eliot, T. S., 720, 110, 133, 228; "The Love Song of J. Alfred Prufrock," 217; "The Waste Land," 217
- Elizabeth, Queen of Hungary, 191
- Elizabeth I, Queen of England, 31, 1, 77, 84, 97, 141, 142, 184, 198, 263
- Ellington, Duke, 526
- El Salvador, 169
- Emancipation Proclamation, 11
- Emericus, Saint, 198
- Emerson, Ralph Waldo, 504, 29, 96, 98, 112, 151
- encyclopedia, 134-35, 171
- Engels, Friedrich, 415
- engines, 33, 34, 43, 44, 70, 82, 297
- England, 3, 5, 10, 12, 16, 21, 23, 25, 27, 28, 29, 30, 33, 42, 46, 49, 50,

Index

England (cont.)

54, 58, 59, 63, 66, 67, 71, 77, 78,
79, 82, 84, 87, 88, 94, 95, 97, 99,
108, 110, 116, 118, 126, 127, 133,
136, 141, 146, 147, 148, 159, 160,
164, 169-70, 173, 177, 178, 182,
184, 186-87, 188, 189, 190, 192-
93, 194, 198, 205, 207, 217, 228,
236, 238, 239, 242, 243, 244, 247,
248, 249, 254, 255, 256, 260, 263,
264, 265, 268, 277, 280, 292,
293, 295, 296, 297, 301, 302
English Revolution of 1688, 5
Enlightenment, 15, 42, 66, 81, 142,
199
environmental conservation, 113,
194, 201-2, 294
Epee, Charles Michel de L', 622,
181, 209
Equal Rights Amendment, 108
Equitable Life Insurance-Building,
New York, 26
Erasmus, Desiderius, 97, 2, 104,
132; *Adagia*, 28; *The Praise of
Folly*, 28
Eriksson, Leif, 411
Erik the Red, 124
Escoffier, Auguste, 346, 273
essays, 130
Esterházy, Prince, 88
Ethiopia, 114, 200-201
etiquette, 233
Euclid, 137
evangelical movement, 286-87
Evans, Oliver, 232
evolutionary theory, 3-4, 239,
243-44, 275
existentialism, 109-10, 226, 275, 279
experimental psychology, 146-47
exploration, 2, 13, 36, 38, 45-46,
58, 66, 88, 102, 117-18, 122,
124-25, 142, 153, 163, 167, 212,
213, 218, 257, 262-63, 278,
292, 301
Eyck, Jan van, 335; *Adoration of the
Sacred Lamb*, 101

Fabergé, Peter Carl, 792
factory design, 139
Fahrenheit, Daniel, 261
Fairbank, John, 18
Fairbanks, Douglas, 238, 288
Faloppio, Gabrielle, 449
Faraday, Michael, 119

Farmer, Fannie, 555; *The Boston
Cooking School Cookbook*, 167
farming, 237, 239, 292
Farouk, King of Egypt, 51, 254
Fascism, 138, 200
fashion, 231, 291
fast food, 142, 222-23
Faulkner, William, 525; *As I Lay
Dying*, 158; *The Sound and the
Fury*, 158
Favaloro, René, 705
Favre, Bret, 61
Fela, 989
Fellini, Federico, 834; *La Dolce
Vita*, 251
Fermat, Pierre de, 362
Fermi, Enrico, 395
feudalism, 111, 179
Fibiger, Johannes, 291
Fielding, Henry, 686; *The History
of Tom Jones*, 205, 206
film, 44, 134, 146, 148, 215, 224, 238,
251, 260, 280, 285-86, 287,
288-89, 298
Fiorelli, Giuseppe, 718
Firdawsi, 356, 175; *Shah-nameh*,
107, 175
fishing, 230
FitzGerald, Edward, *The Rubaiyat
of Omar Khayyam*, 171
Fitzgerald, Ella, 993, 301
Fitzgerald, F. Scott, 218
Flaubert, Gustave, 398; *Madame
Bovary*, 119
Fleming, Alexander, 55, 1
Flemish painting, 77, 101
Florence, 10, 13, 25, 48, 67, 68, 69,
92, 97, 100, 135, 190, 245, 252, 255
Florey, Harold, 17
Foch, Ferdinand, 417
Fokine, Michel, 74, 252
food and cooking, 104, 130, 142,
167, 175, 207-8, 223, 226, 249,
260, 273
Food and Drug Administration,
U.S., 260
Forbes magazine, 72, 189
Ford, Ford Madox, 110
Ford, Henry, 51, 82, 139, 159, 297
Ford, John, 712; *Stagecoach*, 215
Forssmann, Werner, 788
forts, 225
Foster, Stephen, 833, 103
Foucault, Jean-Bernard-Léon, 761

Fox, George, 786
Fracastoro, Girolamo, 920; *Syphilis
sive morbus Gallicus*, 277
France, 6, 10, 12, 19, 20, 21, 23, 25,
33, 36, 42, 44, 48, 50, 52, 58, 59,
63, 67, 68, 74, 80, 81, 82, 87, 92,
96, 104, 105, 115, 117, 119, 126,
127, 130, 138, 140, 142, 148, 159,
167, 168, 172, 176, 184, 185, 189,
190, 191, 192, 193, 195, 197, 208,
214-15, 217, 225, 231, 234, 259,
266, 281, 283
France, Anatole, 92
Franciscans, 12-13, 171, 178, 182, 191
Francis Ferdinand, Archduke, 47, 80
Francis Joseph, emperor of Austria-
Hungary, 266
Francis of Assisi, 39, 142, 258
Francis I, King of France, 19, 147
Franco, Francisco, 666
Franco-Prussian War, 86, 153
Frank, Anne, 481; *The Diary of
Anne Frank*, 144
Frank, Dimitri Frenkel, 75
Franklin, Benjamin, 54, 65, 93, 94,
217, 230; *Poor Richard's
Almanack*, 17
Frederick the Great, 58, 107
Frederick II, Holy Roman emperor,
480, 142
French and Indian War, 197
French Revolution, 6, 20, 21, 54, 74,
95, 127, 193, 196, 234, 255, 259,
292
Freud, Anna, 629
Freud, Sigmund, 15, 4, 37, 44, 50,
75, 109, 152, 173, 189-90, 221, 225
Friedan, Betty, 358; *The Feminine
Mystique*, 108
Friedman, Milton, 731, 211, 222
Friedrich, Carl J., 18
Froebel, Friedrich, 906; *The Educa-
tion of Man*, 273
Frost, Robert, 828, 110, 184, 241;
"The Gift Outright," 249
frozen food, 112
Fugger, Jakob, 493, 121, 302
Fuller, Buckminster, 769
Fuller, Margaret, 323; *Woman in the
Nineteenth Century*, 98
Fulton, Robert, 246
fungicide, 193-94
fur market, 159-60
furniture, 160-61, 171

Index

- Gable, Clark, 286
 Gagarin, Yuri, 499, 292
 Galen, 71
 Galileo Galilei, 4, 1, 40, 43, 73, 171, 251; *The Dialogues*, 3
 Gallaudet, Thomas Hopkins, 698
 Gallup, George, 859, 241,
 Galvani, Luigi, 503, 128
 gamma rays, 39
 Gamow, George, 674, 171
 Gandhi, Indira, 791, 68, 268
 Gandhi, Mohandas K., 12, 67, 113, 175, 227, 268
 Gandhi, Rajiv, 68
 Gandhi, Sanjay, 68
 Garibaldi, Giuseppe, 368, 267
 gas engines, 33
 Gates, William, 302
 Gauguin, Paul, 545, 80
 Gauss, Carl, 109, 214; *Disquisitiones Arithmeticae*, 34
 Geisel, Theodore Seuss, 998; *The Cat in the Hat*, 298
 Gempei War, 179
 Genentech, 185
 General Motors, 293
 genetics, 31, 32-33, 38, 154, 185, 186, 199
 Genghis Khan, 43, 27, 57, 10, 148
 geology, 155
 George III, King of England, 452, 242
 Germain, Sophie, 709
 Germany, 7, 11, 18, 23, 24, 33, 36, 40, 50, 53, 55, 66, 67, 68, 78, 81-82, 83, 106, 109, 112, 126, 128, 130, 134, 142, 144, 147, 153, 175, 187, 191-92, 194, 199, 214, 215, 223, 224, 225, 245, 248, 252, 273, 274, 275, 276-77
 Gershwin, George, 857, 297; *An American in Paris*, 257; *Porgy and Bess*, 257; *Rhapsody in Blue*, 257
 Gershwin, Ira, 257, 297
 Ghana, 207
 Giannini, A. P., 981
 Gibbon, Edward, 654; *History of the Decline and Fall of the Roman Empire*, 196
 Gibbs, J. Willard, 825
 Gibran, Kahlil, 950; *The Prophet*, 285
 Gilbert, William S., 764
 Gilbert and Sullivan, 146, 229; *H.M.S. Pinafore*, 229; *The Mikado*, 229; *The Pirates of Penzance*, 229
 Gilbreth, Frank, 916; *Cheaper by the Dozen*, 276
 Gillette, King, 602
 Gilman, Charlotte Perkins, 252; *Women and Economics*, 76
 Giorgione, 122
 Giotto, 25, 219
 Girl Scouts, 236
 Gladstone, William, 638, 192, 265
 Glasse, Hannah, 693; *The Art of Cookery*, 207
 Glidden, Joseph, 680
 globes, 167
 Goddard, Robert, 53
 Godey's *Lady's Book*, 249
 Godiva, Lady, 301
 Goebbels, Joseph, 918
 Goering, Hermann, 155
 Goethe, Johann, 131, 18, 103; *Faust*, 40, 64
 Goldman, Emma, 886
 Goldmark, Peter, 645
 Goldwater, Barry, 54
 golf, 174
 Gompers, Samuel, 661
 Goodyear, Charles, 184
 Gorbachev, Mikhail, 237, 232, 301
 Gorky, Maxim, 57
 Gorrie, John, 450
 Gounod, Charles, 40
 Goya, Francisco José de, 340; *The Third of May 1808*, 103
 Graham, Martha, 818
 Grant, Cary, 953, 94, 224
 Grant, Ulysses S., 371, 156, 264
 Gratian, 249; *Decretum*, 75
 Graunt, John, 824
 Graves, Robert, 160
 Great Awakening, 236
 Great Britain, *see* England
 Great Leap Forward, 16
 Greece, 84, 145, 223, 232, 233
 Greeley, Horace, 6, 69, 98
 Green Revolution, 85
 Gregg, John, 660
 Gregory VII, Pope, 378, 53, 91
 Gregory IX, Pope, 475
 Gregory X, Pope, 218
 Gregory XI, Pope, 102
 Gregory XIII, Pope, 802
 Griffith, David Wark, 145, 288; *The Birth of a Nation*, 44
 Grimm, Jacob, 272
 Grimm, Wilhelm, 273
 Groote, Gerhard, 687
 Gropius, Walter, 173
 Grotius, Hugo, 166; *On the Law of War and Peace*, 50
 Grout, Donald, 50
 Guatemala, 72
 Guevara, Che, 941
 Guggenheim Museum, New York, 48
 Guido of Arezzo, 408; *Micrologus*, 124
 Guinness, Benjamin Lee, 946
 Guinness Stout, 284
 guns, 32, 41, 94
 Gustavus Adolphus of Sweden, 423
 Gutenberg, Johannes, 1, 64
 Hahn, Otto, 102
 Hahnemann, Samuel, 893
 haiku, 66-67
 Haile Selassie, 669
 Haiti, 234, 257
 Hale, Sarah Josepha, 827
 Hamilton, Alexander, 190
 Hamilton, Emma, 188
 Hammarström, Dag, 523
 Hammerstein, Oscar II, 253
 Hammond, John H., Jr., 891
 Handel, George Frederic, 565; *The Messiah*, 169, 170; *Water Music*, 169
 Hannibal, 32
 Harington, John, 406
 Harlem Renaissance, 253
 Harold, King of England, 10
 Harrison, George, 99
 Harvard, John, 763
 Harvard College, 229
 Harvey, William, 47
 Hawaii, 142
 Hawkins, John, 97
 Hawthorne, Nathaniel, 675, 216; *The Scarlet Letter*, 202
 Haydn, Franz Joseph, 88, 103; *The Creation*, 88
 Hayek, Friedrich von, 738, 211, 220; *The Road to Serfdom*, 222
 Hearst, William Randolph, 649
 heart surgery, 213, 236, 293
 Hefner, Hugh, 937, 271

Index

Hegel, Georg Wilhelm Friedrich, 59, 134
 Heidegger, Martin, 914, 18
 Heifetz, Jascha, 186
 Heine, Heinrich, 103, 263
 helicopter, 247
 Hemingway, Ernest, 388, 56, 110, 158, 218, 269, 273; *A Farewell to Arms*, 116; *For Whom the Bell Tolls*, 116
 Henry, Joseph, 605
 Henry I, King of England, 189
 Henry II, King of England, 359, 126, 127
 Henry II, King of France, 184, 190
 Henry III, Holy Roman emperor, 62
 Henry III, King of England, 189, 243
 Henry IV, Holy Roman emperor, 177, 113
 Henry IV, King of France, 221
 Henry VII, King of England, 659
 Henry VIII, King of England, 100, 28, 104, 139, 141, 154, 198, 255-56
 Henry the Navigator, 153, 66
 Hepburn, Katharine, 951
 Herbert of Cheshire, 765
 Herodotus, 11, 64
 Hershey, Milton, 249
 Hertz, Heinrich, 28, 453
 Herzl, Theodor, 212; *The Jewish State*, 65
 Hewlett-Packard, 219
 Hidalgo y Costilla, Miguel, 807
 Hill, Rowland, 603
 Hinduism, 27, 45, 56, 175, 178-79, 227, 264, 277
 Hiroshige, Ando, 477; *Fifty-Three Stations of the Tokaido Road*, 143
 historians, 86, 88-89, 196-97, 207, 233-34, 238
 Hitchcock, Alfred, 746, 286; *Psycho*, 224
 Hitler, Adolf, 20, 12, 18, 24, 57, 66, 68, 130, 138, 144, 153, 155, 191, 200, 204, 224, 226, 232, 245, 273, 274, 275, 276, 298
 Hobbes, Thomas, 151
 Hodgkin, Dorothy Crowfoot, 682
 Hoffman, Dustin, 85
 Hoffmann, Felix, 826
 Hokusai, 514, 143; *Thirty-six Views of Mount Fuji*, 155
 Holocaust, 7, 144, 232, 284
 Holy Roman Empire, 53, 62, 144; *see also specific emperors*

Home Insurance Company Building, Chicago, 26
 homeopathy, 267
 Homer, 46, 51, 232
 Homer, Winslow, 518; *Fog Warning*, 156; *The Wreck*, 156
 homosexuality, 172, 255, 275-76, 299
 Hopkins, Frederick, 535
 Horney, Karen, 502
 horse racing, 295
 horticulture, 199-200
 hotels, 273
 Houdini, Harry, 970
 Hounsfield, Godfrey Newbold, 539
 Houseman, A. E., 95-96
 House Un-American Activities Committee, 278
 Howe, Elias, 96
 Hoyle, Edmond, 992
 Hoyle, Fred, 202
 Hubble, Edwin, 572
 Hughes, Langston, 844
 Hugo, Victor, 163, 46, 128, 140, 200; *The Hunchback of Notre Dame*, 49; *Les Misérables*, 49
 Hull House, Chicago, 64
 Humboldt, Alexander von, 98; *Cosmos*, 29
 Hume, David, 185
 Hungary, 21, 57, 68, 107, 197-98, 283
 Hung Hsiu-ch'uan, 324
 Hunt, Leigh, 154
 Hunt, Walter, 917
 Hus, Jan, 387
 Hussey, Obed, 237
 Huxley, Aldous, *Brave New World*, 239
 Huxley, Thomas, 799
 Huygens, Christiaan, 333
 hydrogen, 135
 hydrogen bomb, 232, 288
 Ibn al-'Arabi, 350; *Meccan Revelations*, 105
 Ibn al-Haytham, 456; *Treasury of Optics*, 137
 Ibn Battutah, 939
 Ibn Khaldun, 549; *The Universal History*, 165
 Ibn Sa'ud, 'Abd al-'Aziz, 488
 Ibn Sina, 161; *Canon of Medicine*, 48
 Ibn Taymiyah (Taqi ad-Din), 313
 Ibsen, Henrik, 167; *A Doll's House*, 50; *Ghost*, 50

Iceland, 124
 Ignatius of Loyola, 115, 69, 130
 Ikkyu, 178
 Impressionism, 58, 115, 133, 144, 155, 164, 183, 188-89, 227
 Incas, 257
 India, 5, 27, 38, 45, 51, 54, 56, 67-68, 69, 85, 94, 143, 174-75, 231, 237, 238, 256, 260, 262, 264, 268, 277, 289
 individual rights, 24
 Indochina, 253, 283
 Indonesia, 102, 132
 industrial design, 279
 industrialization, 16, 34, 41, 44, 52, 70, 73, 94, 99, 125, 131, 139, 145, 153, 184, 194, 205, 279, 291, 293
 Industrial Revolution, 34, 52, 73, 79, 94, 131, 176, 196, 258, 277, 291
 Ingres, Jean-Auguste-Dominique, 926, 128; *Grand Odalisque*, 279; *Vow of Louis XIII*, 279
 Innocent III, Pope, 78, 189
 Innocent XII, Pope, 264
 inoculation, 27, 95
 Inquisition, 2, 3, 36, 59, 120, 132, 142
 insulin, 139
 International Red Cross, 86
 inventions, *see science and inventions; specific inventors and inventions*
 investing, 78-79, 131, 266, 291-92, 294, 298
 in vitro fertilization, 235
 Iran, 46, 95, 213
 Iraq, 21
 Ireland, 147, 157, 174, 192, 284
 Irving, Washington, 544
 Isabella I, Queen of Spain, 117, 2, 120
 Islam, 14, 39, 46, 54, 95, 105-6, 107, 148-49, 156, 165, 174-75, 178-79, 202, 204, 247
 Israel, 51, 65, 95, 146, 149, 220, 258, 267
 Italy, 4, 5, 10, 12, 19, 23, 25, 32, 53, 55, 56, 67, 69, 70, 72, 77, 92, 97, 100, 110-11, 114, 138, 143, 159, 160, 162, 163, 174, 178, 216, 237, 251, 252, 255, 261, 266-67
 Ito Hirobumi, 242
 Ivan the Great, 229, 73
 Ivan the Terrible, 243, 222
 Iwasaki Yataro, 506

Index

- Jackson, Mahalia, 984
 Jacquard, Joseph-Marie, 174
 Jalal ad-Din ar-Rumi, 567; *Mathnavi*, 170
 James, Henry, 557, 163, 184, 196, 202; *Daisy Miller*, 167; *The Portrait of a Lady*, 167
 James, William, 543, 147, 167
 James I, King of England, 879, 25, 142, 184, 243, 244
 James II, King of England, 59
 Japan, 16, 17-18, 22, 36, 38, 57-58, 66-67, 69, 73, 81, 86, 101, 108-9, 111, 122-23, 125, 132, 143, 145, 153, 155, 178, 179, 203-4, 209, 213, 215, 260, 292
 Jaspers, Karl, 15, 18
 Jayavarman VII of Indochina, 843
 jazz, 97-98, 159, 256, 289, 294, 296, 297
 Jefferson, Thomas, 64, 17, 42, 56, 57, 65, 80, 85-86, 153, 172, 176, 230, 263
 Jenkins, Charles, 51
 Jenner, Edward, 90
 Jenney, William Le Baron, 89
 Jerusalem, 20, 39, 144, 263
 Jesuits, 35-36, 69, 244
 Jews, 7, 36, 39, 40-41, 50, 65, 75, 78, 95, 102, 120, 132, 142, 144, 177, 189, 192, 193, 218, 232, 263, 266, 275, 284
 Jinnah, Mohammed Ali, 585
 Joan of Arc, 83, 242
 Jobs, Stephen, 215
 John, Elton, 298
 John I, King of England, 416, 127, 189
 John I, King of Portugal, 234
 John II, King of Portugal, 298, 167
 John III, King of Portugal, 439
 John III Sobieski, King of Poland, 241
 John XXII, Pope, 28, 102
 John XXIII, Pope, 343, 91
 John of Austria, 276
 John Paul II, Pope, 627
 Johnson, Lyndon, 112, 275
 Johnson, Paul, 11
 Johnson, Samuel, 182, 55, 80, 119; *Dictionary of the English Language*, 54; *Lives of the Poets*, 54
 Jones, Inigo, 642
 Jonson, Ben, 811; *The Alchemist*, 244; *Volpone*, 244
 Jordan, Michael, 903, 61, 186, 207, 212, 271
 Joseph II, Holy Roman emperor, 212
 journalism, 193, 195, 233, 277, 295
 Joyce, James, 171, 70, 110, 167; *Finnegan's Wake*, 51; *Portrait of the Artist as a Young Man*, 51; *Ulysses*, 51
 Juárez, Benito, 195
 Judah ha-Levi, 880; "Ode to Zion," 263
 Julius II, Pope, 794, 5, 77, 78
 Jung, Carl, 146, 6
 Kafka, Franz, 233, 59; *The Metamorphosis*, 70
 Kahn, Albert, 463, 121
 Kameny, Franklin, 915
 Kandinsky, Wassily, 451, 246; *Composition I*, 136
 K'ang-hsi, 189
 Kant, Immanuel, 49, 55, 75
 Kean, Edmund, 495
 Keats, John, 297, 154; *Endymion*, 88
 Keller, Helen, 304
 Kelley, Florence, 861
 Kellogg, John Harvey, 430, 121
 Kelly, William, 99
 Kennedy, John F., 19, 112, 113, 140, 149, 214, 247, 249, 271, 273, 275, 302
 Kenny, Elizabeth, 689, 181
 Kent, Allegra, 74
 Kenyatta, Jomo, 216
 Kepler, Johannes, 33, 62
 Kern, Jerome, 141
 Keynes, John Maynard, 201, 133, 167, 220, 222; *The General Theory of Employment, Interest and Money*, 62
 Khomeini, Ayatollah, 95
 Khrushchev, Nikita, 619, 140, 149, 292
 Kidd, Captain, 968
 Kierkegaard, Søren, 365
 kindergarten, 273, 280
 King, Martin Luther, Jr., 56, 1, 113, 247, 284
 Kinsey, Alfred, 849; *Sexual Behavior in the Human Female*, 255; *Sexual Behavior in the Human Male*, 255
 Kipling, Rudyard, 146, 202
 Kissinger, Henry, 54, 267
 Klee, Paul, 839; *Death and Fire*, 252
 Knox, John, 547
 Koch, Robert, 211, 277
 Kodak, 146
 Koestler, Arthur, 7
 Kohl, Helmut, 742
 Koran, 46, 95
 Korea, 73
 Korean War, 16, 179
 Korolyov, Sergey, 976
 Kroc, Ray, 740
 Kruger, Paul, 881
 Krupp, Alfred, 507
 Kublai Khan, 332, 20
 Kulthum, Umm, 847
 Kuomintang, 86
 Kurosawa Akira, 868; *Rashomon*, 260
 Kutuzov, Mikhail, 898
 labor, 198, 258, 272, 289
 LaChapelle, Marie, 559; *Pratique des accouchements*, 168
 Laënnec, René-Théophile-Hyacinthe, 974
 Lafayette, Marquis de, 850
 La Fontaine, Jean de, 508
 Lagrant, Joseph Louis, 20
 Lamb, Charles, 3
 Lamb, Lady Caroline, 115
 landscape architecture, 141
 Landsteiner, Karl, 864
 Langton, Stephen, 628
 Las Casas, Bartholomé de, 239
 lasers, 246-47
 Lasker, Albert, 979
 Lateran Council, 23
 lathe, 131
 Latin America, 98, 169, 176
 Lavoisier, Antoine-Laurent, 67, 42
 law, 50, 75, 84, 85-86, 87, 105, 142, 172, 230, 243, 280-81
 Lawrence, D. H., 110, 158
 League of Nations, 130, 132
 Lear, Edward, 957
 Leblanc, Nicolas, 652
 Le Corbusier, 155, 279
 Lee, Robert E., 515, 111
 Leeuwenhoek, Anton van, 107, 155, 221
 Leibniz, Gottfried Wilhelm, 88, 3, 34
 Lenin, Vladimir Ilyich, 41, 42, 129, 190, 198

Index

Lennon, John, 328
 Leonardo da Vinci, 9, 32, 39, 48, 67,
 97, 239, 245, 247; *Mona Lisa*, 4
 Leonard of Pisa, 264; *The Book of
 Calculation*, 79
 Leo IX, Pope, 203
 Leo X, Pope, 255
 Leo XIII, Pope, 258
 Lessing, Gotthold, 663; *Laokoon*,
 199; *Minna von Barnhelm*, 199
 Lévi-Strauss, Claude, 114
 Levitt, William, 994
 Lewes, George Henry, 55
 Lewis, C. S., 19
 Lewis, John L., 964
 Lewis, Meriwether, 505
 Lewis and Clark, 19-20, 153, 263
 Libby, Willard, 876
 life expectancy, 248
 Life magazine, 165, 235
 Li Hung-chang, 438
 Lilienthal, Otto, 8, 31, 102
 Lincoln, Abraham, 32, 17, 24, 87,
 96, 110, 137, 183, 249, 281
 Lind, Jenny, 28
 Lindbergh, Charles, 516
 linear perspective, 25
 linguistics, 275
 Linnaeus, Carl, 230; *Systema Natu-
 rae*, 70
 Lister, Joseph, 122, 85
 Liszt, Franz, 300, 106, 128; *Liebe-
 straum*, 89; *Les Preludes*, 89
 literature, 3, 10, 11, 12, 14, 16, 19, 21,
 22, 23, 28-29, 35, 40, 49, 50, 51,
 52-53, 54, 55, 56, 57, 58-59, 63,
 64, 70-71, 76, 81-82, 83, 92,
 95-96, 97, 107, 110, 111-12, 114-
 15, 116, 117, 118, 119, 128-29, 130,
 133, 134-35, 137, 143-44, 145, 147,
 151, 152-53, 154, 157, 158, 161,
 163-64, 165, 166, 167, 168, 169,
 170, 172, 173, 175, 177, 183, 184,
 186-87, 191, 194-95, 196, 199,
 202-3, 205-6, 207, 216, 217, 218,
 226, 227, 228, 232, 233, 244, 249,
 253-54, 259-60, 261, 262, 263,
 265, 268, 269, 272, 273-74, 277,
 279, 283, 285, 287, 298; see also
 specific authors and works
 Livingston, Robert, 74
 Livingstone, David, 724
 Locke, John, 11
 logarithms, 258-59

London, 3, 6, 78, 94, 104, 135, 148,
 168, 169, 184, 189, 193, 228, 229,
 248, 262, 268, 273, 280, 295
 London, Jack, 899; *The Call of the
 Wild*, 269
 Longfellow, Henry Wadsworth, 219
 looms, 52
 Lope de Vega, Félix, 551; *Fuenteove-
 juna*, 166
 Lopes, Fernão, 780; *Chronicles of
 Pedro, Ferdinand, and John I*, 234
 Lopokova, Lydia, 62
 Lorca, Federico García, 929;
Lament for Ignacio Mejías, 280
 Louis IV, Holy Roman emperor, 182
 Louis VII, King of France, 127, 159
 Louis VIII, King of France, 208
 Louis IX, King of France, 613, 208,
 295
 Louis XIII, King of France, 50, 105
 Louis XIV, King of France, 63, 56,
 87, 105, 225, 250
 Louis XVI, King of France, 42, 234
 Louis XVIII, King of France, 127
 Louis of Bavaria, Holy Roman
 emperor, 28
 Louis of Thuringia, 57
 Louis Philippe, King of France, 176
 Lovelace, Ada Byron, 960
 LP records, 194
 lubricating cup, 297-98
 Luce, Henry, 165
 Lu Hsün, 591; "Diary of a Mad-
 man," 177
 Lully, François, 70
 Lumière, Auguste, 134
 Lumière, Louis, 446
 Luther, Martin, 3, 21, 28, 56, 102,
 140, 147, 229, 255
 Luthuli, Albert, 536
 Lyell, Charles, 512; *Principles of
 Geology*, 155
 McAdam, John, 235
 MacArthur, General Douglas, 600,
 145
 Macauley, Thomas Babington, 796,
 18, 242; *History of England from
 the Accession of James II*, 238
 McCartney, Paul, 327
 McCormick, Cyrus, 793
 McCormick, Katharine Dexter, 717
 McCoy, Elijah, 995
 Macdonald, John, 885

McDonald's, 222-23
 Mach, Ernest, 631
 Machiavelli, Niccolò, 40, 54, 88,
 130, 255; *The Prince*, 13
 MacKenzie, Alexander, 877
 McKinley, William, 209, 265
 Madison, Dolley, 80
 Madison, James, 268, 56, 277; *Fed-
 eralist Papers*, 80
 Magellan, Ferdinand, 42, 74, 167
 magic, 290-91
 Magna Carta, 126, 189
 Magnus, Albertus, 49
 Maharishi, Sri Ramana, 921
 Mahdi, al-, 673
 Mahler, Alma, 174
 Mahler, Gustav, 578
 Mahmud of Ghazna, Sultan, 583, 107
 mail-order merchandise, 152
 Maimonides, 132, 177
 Malcolm X, 821
 Malinowski, Bronislaw, 854
 Mallarmé, Stéphane, 164, 169
 Mallon, Mary, 586
 Mallory, George, 935
 Malman, Theodore, 246
 Malpighi, Marcello, 884
 Malraux, Andre, 942; *Man's Fate*,
 283; *Man's Hope*, 283
 Malthus, Thomas, 306, 39
 management, 212, 220, 293
 Manchu dynasty, 86, 98
 Mandela, Nelson, 354, 36
 Manet, Édouard, 301, 53, 183, 189;
Luncheon on the Grass, 92;
Olympia, 92
 Manhattan Project, 24
 Mann, Horace, 317, 91
 Mann, Thomas, 584, 40; *The
 Magic Mountain*, 175
 Mannlicher, Ferdinand Ritter von,
 309
 Manutius, Aldus, 210
 Mao Ze-dong, 50, 1, 137, 173, 188
 Marat, Jean-Paul, 399
 Marbury v. Madison, 85
 Marceau, Marcel, 934
 March on Washington (1963), 17
 Marconi, Guglielmo, 95, 136, 266
 Margaret, Queen of Scandinavia,
 736
 Marggraf, Andreas, 621
 Maria Theresa, Archduchess of
 Austria, 355

Index

- Marie-Antoinette, Queen of France, 781, 107, 212, 249
 Marie de Médicis, 67
 Marine Corps, U.S., 278
 Marsh, George P., 376; *Man and Nature*, 113
 Marshall, George, 344, 112
 Marshall, John, 287, 172
 Marshall, Thurgood, 348
 Marsilius of Padua, 96; *Defensor Pacis*, 28
 Martí, José, 537
 Martie, Pietro, 36
 Martin, Gregory, 909
 Marx, Karl, 14, 7, 18, 39, 61, 165, 170, 195, 224; *Das Kapital*, 3-4, 6
 Marxism, 5-6, 122, 125, 129-30, 224, 283
 Mary I, Queen of England, 129, 141, 263
 Mary Stuart, Queen of Scots, 610, 10, 82
 Masaccio, 159; *Life of Saint Peter*, 48
 mass production, 16, 125, 279
 Mata Hari, 940
 mathematics, 8-9, 26, 34, 44, 45, 79, 100, 109, 147, 187, 214, 251, 258-59, 288, 289-90
 Matisse, Henri, 269, 218; *The Dance*, 80
 Matsuo Basho, 218
 Mauchly, John, 23
 Maudslay, Henry, 436
 Maugham, W. Somerset, 76
 Maurin, Peter, 196
 Maximilian I, Holy Roman emperor, 943
 Maxwell, James Clerk, 205, 136, 248
 Mazzini, Giuseppe, 892
 Mead, Margaret, 379, 223; *Coming of Age in Samoa*, 114
 Medici, Cosimo de', 851
 Medici, Giovanni de', 13
 Medici, Lorenzo "the Magnificent" de', 228
 medicine and physiology, 17, 27, 33-34, 37-38, 64, 65, 67, 69, 71, 73-74, 75, 85, 86-87, 95, 131, 135, 136, 138-39, 148, 161, 162, 168, 169, 175, 192, 201, 205, 212, 213, 216, 219, 235, 236, 257, 259, 261, 264, 267, 277, 290, 291, 292, 293
 Mehmed II the Conqueror, 173
 Meir, Golda, 894
 Meitner, Lise, 336
 Melville, Herman, 716, 227; *Moby-Dick*, 216
 Mendel, Gregor, 104, 31, 38, 199
 Mendeleyev, Dmitry, 253
 Mendelssohn, Felix, 128
 Mendoza, Antonio de, 925
 Menelik II, 380
 mental illness, 192, 261
 Mercator, Gerardus, 347
 Merici, Angela, 580
 Merton, Thomas, 77
 Metternich, Prince, 179, 86
 Mexico, 45, 58, 85, 243, 278-79, 282
 Meyer, Julius, 76
 Michelangelo Buonarroti, 13, 39, 48, 67, 69, 84, 97, 100; *David*, 5; *Pietà*, 5; Sistine Chapel, 5, 237-38
 microbiology, 33
 microscopes, 33
 Middle Ages, 10, 23, 48-49, 51-52, 53, 102, 108, 161, 165, 174, 207
 Mies van der Rohe, Ludwig, 364, 279
 Mi Fei, 295
 military, 6, 13-14, 18, 27, 35, 39, 45, 52, 54, 67, 68, 73, 82, 83, 94, 98, 100-101, 104, 108-9, 110, 111, 112, 118-19, 123, 126, 128, 140, 148, 153, 154, 155-56, 159, 166, 175, 179, 188, 190, 197, 199, 200, 202, 213, 222, 225, 233, 236, 239, 243, 247, 253, 255, 257, 260, 264, 268, 278, 282, 283, 290, 292-93
 military marches, 278
 Mill, James, 24
 Mill, John Stuart, 81, 207; "On Liberty," 24
 Millardet, Pierre-Marie-Alexis, 643
 Miller, Henry, 269
 Millet, Jean, 168
 Milton, John, 53; *Paradise Lost*, 3, 16, 54
 mime, 281
 Minamoto no Yoritomo, 598
 Ming dynasty, 18, 127-28, 222
 Miranda, Francisco de, 588
 Mirandola, Pico della, 59
 Mitsubishi, 153
 Mitsui Takatoshi, 271, 153
 Mobutu Sese Seko, 734
 Moët & Chandon, 250
 Molière, Jean-Baptiste Poquelin, 175; *The Imaginary Invalid*, 52; *The Misanthrope*, 52; *Tartuffe*, 52
 Moltke, Helmuth von, 35
 Mondrian, Piet, 797, 234
 Monet, Claude, 196, 115, 155, 188; *Impression: Sunrise*, 1872, 58
 Mongol empire, 14-15, 18, 69, 100-101, 148, 154
 Monier, Joseph, 440
 Monnet, Jean, 433
 Monroe, James, 708, 208
 Monroe, Marilyn, 997, 282
 Monroe Doctrine, 213-14
 Montagu, John, 473
 Montaigne, Michel de, 432, 142
 Montesquieu, Charles-Louis, 106, 42, 165; *Spirit of the Laws*, 33
 Montessori, Maria, 650
 Monteverdi, Claudio, 231; *Orfeo*, 70
 Montezuma, 46
 Moody, Dwight L., 954
 Moore, Henry, 895
 Moore, Marianne, 110
 More, Thomas, 345, 29; *Utopia*, 104
 Morgan, John Pierpont, 435, 121, 289
 Morgan, Thomas Hunt, 124, 31
 Morison, Samuel Eliot, 2, 213
 Morisot, Berthe, 625; *Mother and Sister of the Artist*, 188
 Mormons, 244-45
 morphine, 250
 Morris, William, 644; *The Earthly Paradise*, 194
 Morrison, Toni, 774; *Beloved*, 232; *The Song of Solomon*, 232
 Morse, Samuel, 329, 91, 183
 Morse code, 100
 Morton, William, 701
 Moscow, 69, 73
 Moscow Art Theater, 139
 Moses, 40
 Moses, Grandma, 664
 Mott, Lucretia, 240
 mountain climbing, 281
 Mountbatten, Lord, 175
 Mount Everest, 281
 Mozart, Wolfgang Amadeus, 52, 11, 65, 68, 82, 103, 107, 274; *Don Giovanni*, 16
 Mughal empire, 27, 45
 Murasaki Shikibu, 73; *The Tale of the Genji*, 22
 Museum of Modern Art, New York, 58, 109, 199, 234

Index

- music, 4-5, 11, 16, 49-50, 54-55, 68, 70, 82, 88, 89, 97-98, 99, 103, 106, 123-24, 128, 140-41, 142-43, 159, 162, 169-70, 173, 185-86, 194, 201, 203, 220, 229, 230, 242, 250, 252, 253, 254, 256, 257, 265-66, 269, 277-78, 289, 294-95, 296, 297, 301; *see also specific musicians and instruments*
- Muslims, 20, 27, 45, 46, 49, 51, 52, 137, 175, 185, 218, 242, 247, 264
- Mussolini, Benito, 460, 200, 226, 251
- mutual funds, 298
- mysticism, 102, 170, 244, 285
- Nader, Ralph, 744; *Unsafe at Any Speed*, 224
- Naismith, James, 293, 61
- Napier, John, 863
- Napoleon I, 16, 11, 59, 74, 78-79, 83, 87, 103, 127, 134, 188, 190, 197, 225, 234, 268, 291, 292, 293
- Napoleon III, 6, 58, 170, 189, 195
- Nasser, Gamal Abdel, 170, 254, 258
- Nast, Thomas, 882
- Nation, Carry, 203
- National Association for the Advancement of Colored People, 62, 93, 105
- National Organization for Women, 108
- Nazism, 7, 12, 24, 39, 64, 66, 71, 109, 112, 130, 138, 144, 190, 191-92, 215, 218, 224, 232, 238, 252, 274, 275, 276-77, 284
- Nehru, Jawaharlal, 222, 51, 237
- Nelson, Horatio, 624
- Neuharth, Al, 987
- Newcomen, Thomas, 34
- New Deal, 12, 43, 132, 272
- Newman, John Henry, 896; *Apolo-
gia pro Vita Sua*, 268
- Newman, Paul, 286
- newspapers, 193, 195, 277, 295
- Newton, Isaac, 6, 7, 11, 26, 34, 43, 55, 79, 272; *Principia Mathematica*, 3
- Newton, John, 244
- New Wave directors, 280
- New York City, 141, 171, 253, 280
- New York Herald, The*, 193, 218
- New York Journal*, 195
- New York Times, The*, 44, 156, 246, 295
- New York Tribune*, 6
- New York World*, 195
- New York Yankees, 108
- Neyman, Jerzy, 816
- Nguni, 208
- Nicaragua, 169
- Nichiren, 404
- Nicholas II, Czar of Russia, 237
- Nidetch, Jean, 751
- Niebuhr, Barthold Georg, 777
- Niebuhr, Carsten, 233
- Niebuhr, Reinhold, 905
- Nietzsche, Friedrich, 215, 50
- Nigeria, 287, 296
- Nightingale, Florence, 120
- Nijinsky, Vaslav, 405, 252
- Nixon, Richard, 904, 112, 137, 159, 173, 204, 275
- Nkrumah, Kwame, 690; *Towards
Colonial Freedom*, 207
- Nobel, Alfred, 217, 205
- Nobel Foundation, Sweden, 66
- Norway, 221, 222
- Noyce, Robert, 730, 211
- nuclear physics, 22-23, 101-2, 118
- nursing, 37, 86, 206, 261
- Nyerere, Julius, 953
- nylon, 125
- O'Brien, Edward, 66
- obstetrics, 168
- oceanography, 205
- Ockham, William of, 601, 191
- Ohain, Hans-Joachim Pabst von, 815
- O'Higgins, Bernardo, 484
- oil, 145, 146, 251
- O'Keeffe, Georgia, 606
- Okubo Toshimichi, 116
- Olajuwon, Hakeem, 272
- Olbers, Heinrich, 226
- Olivier, Laurence, 820
- Olmsted, Frederick Law, 470
- Olympics, 223-24
- Omar Khayyám, 571; *Rubaiyat*, 171
- O'Neill, Eugene, 426, 50, 238, 269, 277; *Long Day's Journey into
Night*, 129
- Ono, Yoko, 99
- Oppenheimer, J. Robert, 80, 1, 225
- optics, 137
- Orellana, Francisco de, 542
- organized crime, 158
- Oriental Pearl Television Tower, Shanghai, 26
- Ortelius, 105
- Orwell, George, 760; *Animal Farm*, 228; 1984, 228
- Osman I, 407
- Otis, Elisha, 308
- Otto, Nikolaus, 105, 31, 82
- Ottoman Empire, 21-22, 52, 54, 82, 123, 208-9
- Otto Silent engines, 33
- Ou-yang Hsiu, 231
- Ovando, Nicolás de, 599
- Owen, Robert, 589
- Owens, Jesse, 224
- Oxford Movement, 268
- Packard, David, 727, 211
- Paganini, Niccolò, 617
- Paine, Thomas, 311; *Common Sense*, 94; *The Rights of Man*, 94-95
- Pakistan, 68, 85, 175, 237
- paleontology, 244
- Palestine, 149
- Palestine Liberation Organization, 149
- Palestrina, Giovanni Pierluigi da, 528
- Palladio, Andrea, 133, 193; *The Five
Books of Architecture*, 41
- Palmerston, Lord, 848
- Pankhurst, Emmeline, 206
- papacy, *see* Catholicism; *specific popes*
- Paracelsus, 108
- Paré, Ambroise, 496
- Paris, 44, 52, 55, 58, 65, 67, 68, 78, 82, 92, 96, 115, 119, 126, 128, 134, 138, 156, 168, 178, 189, 192, 217, 218, 226, 231, 234, 246, 252, 262, 273
- Paris Ritz, 273
- Parks, Rosa, 944
- Parliament, English, 49, 63, 71, 87, 188, 242, 244, 247-48, 260
- parliamentary procedure, 295
- Pascal, Blaise, 144, 101; *Pensées*, 44
- Pasteur, Louis, 26, 85, 277
- pasteurization, 9
- Patton, George, 112
- Pauling, Linus, 161
- Paul III, Pope, 72
- Paul V, Pope, 72
- Pavlov, Ivan, 244
- Pavlova, Anna, 245, 252
- pediatrics, 169
- Pedro I of Brazil, Dom, 200
- Pedro II of Brazil, Dom, 667

Index

Peel, Robert, 932, 192
 Pele, 61, 840
 Pemberton, John, 982
 penicillin, 17, 204
 Penn, William, 235
 Pepys, Samuel, 758
 Peregrinus, Petrus, 101; *Epistola de Magnete*, 32
 Peres, Shimon, 149
 Pérignon, Dom, 831
 Periodic Law, 76
 Perkins, Frances, 902
 Perón, Eva, 226
 Perón, Juan, 753
 Perry, Matthew, 707, 57
 Pershing, General John, 104
 Persia, 21, 48, 107, 154, 156, 170, 213
 perspectivism, 66
 Peru, 15, 122, 190, 257
 Pestalozzi, Johann, 865
 Peter the Great, 27, 42, 56, 100
 Petrarch, 112
 Petrie, Sir Flinders, 216
 pharmaceutical industry, 219-20, 248
 philanthropy, 66, 145, 288
 Philidor, Francois-André, 875, 241; *Analysis of Chess*, 262
 Philip of Hesse, 467
 Philippines, 179
 Philip II, King of France, 527
 Philip II, King of Spain, 427, 84, 146
 Philip IV, King of France, 191, 251
 philosophy, 4, 5, 6, 7, 8-9, 15, 18, 26, 27-28, 46, 48-49, 51-52, 55, 66, 75, 81, 103, 104, 109-10, 112, 115, 163, 182, 191, 218, 219, 266, 275, 298-99
 photography, 47, 129, 134, 144, 146, 155, 165, 177, 219
 Phyfe, Duncan, 569
 physics, 6-7, 22-23, 24, 34, 39, 41-42, 44, 55, 63, 64, 74-75, 101-2, 118, 190, 215, 228-29, 232, 246-47, 266
 physiotherapy pioneer, 206-7
 Piaget, Jean, 369
 piano, 68, 128, 289
 Picasso, Pablo, 149, 14, 81, 135, 218, 246, 252; *Guernica*, 45
 Pickford, Mary, 962, 238
 Pierce, John R., 604
 pill, the, 216
 Pilsudski, Josef, 947
 Pincus, Gregorv, 216

Pinel, Philippe, 640
 piracy, 205, 290
 Pirandello, Luigi, 871; *Six Characters in Search of an Author*, 261
 Pitt the Elder, William, 804, 260
 Pitt the Younger, William, 242-43, 244
 Pizarro, Francisco, 858
 Planck, Max, 136, 102, 190
 Planned Parenthood, 29
 plastic, 84-85, 205
 Plato, 64
Playboy magazine, 282
 Pocahontas, 301
 Poe, Edgar Allan, 279, 98, 224
 poetry, 10, 16, 35, 66, 83, 88, 95-96, 97, 100, 107, 110, 115, 118, 143-44, 152-53, 154, 161, 169, 170, 171, 173, 183-84, 186-87, 191, 217, 228, 249, 253-54, 263, 265, 268, 277, 279-80, 285, 287
 Poland, 41, 73, 128, 189, 263, 284-85
 police, 280-81
 polio, 95
 political science, 13
 politics, 8, 10-11, 12, 13, 19-20, 21, 28, 33, 41, 43, 46, 54, 56-57, 65, 73, 80, 85, 86, 92, 94, 98, 111, 112, 138, 145, 149, 173, 184, 192, 193, 200, 204, 209, 213-14, 217, 223, 224, 226, 242, 247-48, 254-55, 258, 265, 266-67, 272-73, 274, 280, 281-82, 284, 286, 296, 301, 302; *see also specific politicians*
 Pollock, Jackson, 785, 238; *Blue Poles*, 235
 polls, 245, 257-58
 Polo, Marco, 66, 100; *Travels*, 20
 Pompadour, Madame de, 250
 Pompeii, 216
 Poniatowsky, Stanislaus, 42
 Pope, Alexander, 3
 population control, 93
 populism, 274
 Porter, Cole, 900, 297; *Kiss Me Kate*, 269; "Night and Day," 269
 Portugal, 13, 38, 46, 66, 88, 97, 122, 132, 200, 233, 264
 positivism, 40
 Post, Emily, 779; *Etiquette*, 233
 postal system, 182
 Pound, Ezra, 367, 63, 184, 268; *Cantos*, 110
 pragmatism, 163

Pravaz, Charles Gabriel, 250
 Pre-Raphaelites, 186
 Presbyterianism, 164-65
 Presley, Elvis, 352
 Priestley, Joseph, 137
 Princip, Gavriilo, 157
 printing press, 2
 prisons, 142, 194, 261
 Prokofiev, Sergey, 615, 252; *Peter and the Wolf*, 186; *Romeo and Juliet*, 186
 Protestantism, 19, 21, 29, 102, 105, 116, 128, 129, 139, 140, 141, 145, 146, 184, 190, 243, 256, 274
 Proudhon, Pierre-Joseph, 648
 Proust, Marcel, 207, 70; *Remembrance of Things Past*, 63, 196
 psychoanalysis, 6, 44, 152, 189-90
 psychology, 37, 44, 111, 146-47, 163
 Ptolemy, 7, 137; *Almagest*, 187
 public education, 96
 public relations, 224-25
 publishing, 2, 64, 81-82, 193, 195, 249, 277
 Puccini, Giacomo, 162
 Pulitzer, Joseph, 195
 Puritanism, 235-36
 Pushkin, Aleksandr, 330; *Eugene Onegin*, 100
 Pym, John, 823
 Quakers, 235
 quantum physics, 41-42, 64
 Quebec, 197
 rabbis, 40-41, 177
 Rabelais, François, 302; *Gargantua and Pantagruel*, 92
 Rabin, Yitzak, 149
 racial segregation, 17, 105, 106-7, 133, 137, 138, 161-62, 284, 290
 Racine, Jean Baptiste, 389, 46, 168; *Iphigenia*, 117; *Phaedra*, 117
 radar, 194
 radiation, 23
 radio, 28, 136, 249
 radioactivity, 262
 radio astronomy, 278
 railroads, 44, 99, 131, 170, 237, 288, 298
 Raleigh, Walter, 472, 10, 263; *History of the World*, 135
 Ramakrishna, 597
 Ramanuja, 187

Index

- Ramanujan, Srinivasa, 966
 Ramazzini, Bernardino, 856; *Diseases of Tradesmen*, 257
 Ranke, Leopold von, 288; *History of the Popes*, 86; *Universal History*, 86
 Raphael Sanzio, 129, 48, 97, 100, 237; *St. George and the Dragon*, 40
 Rashi, 590
 Ravaiillac, François, 67
 Ravel, Maurice, 855; *Bolero*, 256
 razors, 182
 RCA, 26, 249-50
 Reagan, Ronald, 168, 217, 220, 222, 301
 reaper, mechanical, 237
 Reber, Grote, 923
 Reconstruction, 24
 Reese, Pee Wee, 133
 Reformation, 19, 21, 29, 102, 116, 256
 refrigeration, 135
 Regiomontanus, 620; *On Triangles of Every Kind*, 187
 relativity, theory of, 6, 63
 religion, *see specific religions and religious figures*
 Remarque, Erich Maria, 908; *All Quiet on the Western Front*, 273-74
 Rembrandt Harmenszoon van Rijn, 46, 53, 56, 75-76, 84; *Aristotle Contemplating the Bust of Homer*, 15; *A Girl at the Window*, 15; *The Nightwatch*, 14
 remote control, 266
 Renaissance, 4, 5, 13, 28-29, 35, 39-40, 41, 55, 64, 97, 100, 122, 135, 147, 163, 182, 193, 245
 Renard, Jules, 49
 Renoir, Pierre-Auguste, 384, 50, 164, 188, 238
 repeating rifle, 94
 Reuter, Paul Julius, 626
 Reuters news service, 189
 Revson, Charles, 185
 Ricardo, David, 127
 Ricci, Matteo, 739; *History of the Introduction of Christianity in China*, 222
 Richardson, Samuel, 205
 Richard the Lion-Hearted, 127, 159
 Richard III, King of England, 198
 Richelieu, Cardinal, 349
 Rimbaud, Arthur, 887; "Le Bateau Ivre," 265
 Rimsky-Korsakov, Nikolay, 55
 Ripkin, Cal, Jr., 302
 Ritz, César, 907
 Riva-Rocci, Sciopone, 969
 road building, 71
 Robert, Henry, 986; *Robert's Rules of Order*, 295
 Robert the Bruce, 790
 Robeson, Paul, 922
 Robespierre, Maximilien, 68, 74, 119
 Robinson, Jackie, 442, 61
 Rockefeller, John D., 486, 121, 159, 302
 rocketry, 53
 Rodgers, Richard, 841
 Rodgers and Hammerstein, 124, 252-53; *The King and I*, 253; *The Sound of Music*, 253; *South Pacific*, 253
 Rodin, Auguste, 260; *The Age of Bronze*, 78; *The Kiss*, 78; *The Thinker*, 78
 Roebling, John, 444
 Romanticism, 49-50, 78, 103, 118, 140, 173
 Romanus Diogenes, emperor, 156
 Rome, 5, 20, 52, 53, 70, 72, 77, 78, 138, 139, 160, 163, 187, 189, 196, 233, 251, 267
 Romer, Ole, 78
 Röntgen, Wilhelm Conrad, 277
 Roosevelt, Anna Eleanor, 141
 Roosevelt, Franklin Delano, 37, 43, 62, 80, 132, 138, 145, 215, 257, 272, 289
 Roosevelt, Theodore, 700, 260
 Rosas, Juan Manuel de, 98
 Rossetti, Christina, 618, 158
 Rossetti, Dante Gabriel, 187
 Rothschild, Mayer Amschel, 262
 Rous, Henry, 985, 61
 Rousseau, Jean-Jacques, 19, 21, 55, 81, 93, 119, 259; *Confessions*, 7; *Émile*, 7; *The Social Contract*, 7
 Rowse, A. L., 84
 Royal Society, London, 33
 rubber, 184, 205, 289
 Rubens, Peter Paul, 281, 56, 193, 260
 Rubinstein, Helena, 614
 Russell, Bertrand, 593, 28, 191
 Russia, 6, 9, 11, 13, 23, 24, 41, 42, 57, 62, 68, 69, 71-72, 73, 74, 76, 100, 122, 129-30, 139, 140, 145, 149, 177, 185, 186, 187, 194-95, 222, 232, 237, 252, 258, 265, 268, 273, 292
 Russian Revolution, 237
 Russo-Japanese War, 109
 Rustichello, 20
 Ruth, Babe, 360, 61, 91, 207
 Rutherford, Ernest, 128
 Saarinen, Eero, 48
 Sabin, Albert, 95
 Sacajawea, 153
 Sadat, Anwar El-, 862, 267
 safety pin, 276
 St. Paul's Cathedral, London, 78, 83, 189, 193
 St. Peter's, Rome, 77, 78, 160, 237
 Sakharov, Andrei, 775
 Saladin (Salah ad-Din Yusuf), 126
 Salk, Jonas, 314
 Sand, George, 128
 Sandoz Pharmaceuticals, 131
 Sanger, Margaret, 99, 1, 216
 San Martín, José de, 630
 Santa Anna, General, 58
 Santa Claus, 264
 Santayana, George, 999
 Sarmiento, Domingo Faustino, 98
 Sarnoff, David, 830, 26, 241
 Sartre, Jean-Paul, 18, 109, 172, 226, 275
 Sasakawa, Ryoichi, 85
 Sato Eisaku, 679
 Saudi Arabia, 146
 Savery, Thomas, 34
 Savonarola, Girolamo, 303, 100
 Say, Jean-Baptiste, 558
 Schiller, Friedrich, 103
 Schleiden, Matthias, 221
 Schliemann, Heinrich, 776
 Schubert, Franz, 342
 Schumann, Robert, 106
 Schwann, Theodor, 733
 Schwartz, Father Berthold, 103
 Schweitzer, Albert, 670, 181; *Philosophy of Civilization*, 201
 science and inventions, 2, 3-4, 6-7, 9, 10, 11, 15, 20, 22-23, 24, 25, 26, 28, 29, 32, 33, 34, 38, 39, 41-42, 43, 44, 47, 51, 52, 53, 59, 62, 63, 64, 70, 71, 74-75, 76, 78, 79, 82-83, 84-85, 87, 93-94, 96, 99-100, 101, 102, 106, 113-14, 116, 118, 123, 124, 125, 126, 128, 131, 132, 134, 135, 136, 137, 146, 152, 154, 155, 160, 171-72, 182, 183, 184, 185, 186, 187, 190, 192, 193, 194,

Index

199-200, 202, 204, 205, 206, 214,
215, 220-21, 225, 228-29, 237,
239, 244, 246-47, 248, 251, 259,
262, 266, 276, 278, 292, 296, 297
science fiction, 157
Scotland, 107, 184, 236, 248
Scott, Walter, 357, 238; *Ivanhoe*, 107
Second Vatican Council, 104
Segrè, Emilio, 118
Seljuk dynasty, 156
Semmelweis, Ignaz Philipp, 286
Serbia, 47, 80
Serturmer, Friedrich, 241, 832
serum therapy, 67
Seton, Elizabeth, 656
settlement house movement, 64
Seven Years War, 242
sewing machines, 91, 96, 276
sexual revolution, 255, 282
Shah Jahan, 478
Shaka, 552
Shakespeare, William, 5, 2, 16, 19,
22, 110, 114, 140, 148, 244, 247,
263, 277, 282; *Hamlet*, 3; *King
Lear*, 3; *Macbeth*, 3; *Othello*, 3;
Taming of the Shrew, 269
Shaw, George Bernard, 4, 50, 51
Shawnee Indians, 164
Shelley, Mary, 14, 154; *Frankenstein*,
154, 157
Shelley, Percy Bysshe, 509, 14, 115
Sherman, William Tecumseh, 113
Sherman Antitrust Act (1890), 145
Shibasaburo Kitasato, 67, 75
Shipp, Horace, 59
shoguns, 179
Sholes, Christopher Latham, 531,
198
shorthand, 198
Shrapnel, Henry, 977
Sickles, Daniel Edgar, 768
Sikhs, 237
Sikorsky, Igor, 822
silicon chip, 220
Singer, Isaac Bashevis, 878, 96
Singh, Ram, 310
Sioux Indians, 198-99
Sisters of Charity, 197
Sixtus IV, Pope, 187
Skinner, B. F., 121, 73
skyscrapers, 26-27, 94, 214
slavery, 24, 65, 66, 72, 97, 102, 137,
161, 179, 200, 218, 232, 244, 278
smallpox, 26-27, 42

Smith, Adam, 21, 220; *Wealth of
Nations*, 8
Smith, Joseph, 244
Smith, Kate, 141
Snell, Willebrord, 137
Snow, C. P., 34
soccer, 252
Socialism, 224
Society of Jesus, 36
sociology, 40, 243-44, 253
soda, 196
Solidarity, 41, 189
Solzhenitsyn, Aleksandr, 647, 181;
The Gulag Archipelago, 194;
*One Day in the Life of Ivan
Denisovich*, 194
Sophocles, 64
Sousa, John Philip, 924
South Africa, 5, 65, 106-7, 161-62,
166, 281
South America, 15, 45, 98, 101, 145,
163, 176, 190, 200, 226, 257, 283
South Pacific, 58
Soviet Union, *see* Russia
space exploration, 53, 149, 157, 192,
208, 292
Spain, 2, 13, 14, 18-19, 35, 36, 45, 72,
77, 84, 88, 97, 103, 105, 120, 129,
142, 145, 163, 179, 200, 217-18,
242, 257, 278, 279-80, 283
Spanish-American War, 86, 195,
209, 227
Spanish Civil War, 45, 200, 228,
280, 283
Spencer, Herbert, 808; *Principles of
Sociology*, 243
sphygmomanometer, 290
spice trade, 102
spies, 282-83
Spinoza, Baruch, 251
Spock, Benjamin, 562; *Dr. Spock's
Baby and Child Care*, 169
sports and games, 61, 87, 108, 133,
174, 200, 203, 204, 207, 223-24,
230, 245, 252, 272, 281, 289, 295,
296, 297, 302
Stalin, Joseph, 82, 1, 12, 13, 130, 186,
187, 194, 273, 292
Standard Oil Company, 145
Stanislavsky, Konstantin, 465
Stanley, Henry Morton, 218
Stanton, Elizabeth Cady, 86, 72
Starley, James, 386
Starr, Ringo, 99

Starzl, Thomas, 213
statistics, 245-46, 248, 258
steamboats, 74
steam engines, 33, 34, 43, 44, 70, 82,
297
steel, 99, 131, 288, 289
Stein, Gertrude, 725, 81; *The Auto-
biography of Alice B. Toklas*, 218
Steinbeck, John, 901; *The Grapes of
Wrath*, 272, 294
Steinmetz, Charles Proteus, 749
Stephen I, King of Hungary, 658
Stephenson, George, 143
Stephenson, Robert, 44
Stephens, Patrick, 235
stethoscope, 292
Stevens, Nettie Maria, 510
Stevenson, Adlai, 68
Stevenson, Robert Louis, 756, 58;
*The Strange Case of Dr. Jekyll
and Mr. Hyde*, 227; *Treasure
Island*, 227
Stevin, Simon, 836; *The Tenth*, 251
Stieglitz, Alfred, 183
Stone, Lucy, 69
Stout, Rex, 48
Stowe, Harriet Beecher, 457; *Uncle
Tom's Cabin*, 119, 137
Strachey, Lytton, 62, 133
Strauss, Johann, 803
Strauss, Levi, 540
Stravinsky, Igor, 183, 246, 252; *The
Rite of Spring*, 55, 252
Strindberg, August, 50
submarines, 239
suburbs, 297
Sudan, 202
Suez Canal, 38, 127
suffrage, 14, 25, 42-43, 63, 80, 98,
258, 280
Sufism, 105-6
sugar, 187
Suleiman the Magnificent, 71
Sullivan, Anne, 92
Sullivan, John L., 692, 61
Sun Yat-sen, 290 137
Supreme Court, U.S., 85-86, 105,
109, 172, 237, 276
surgery, 148, 213, 236, 293
surrealism, 59, 71, 221
suspension bridges, 134
Swanson, Robert, 612
sweatshops, 258
Sweden, 66, 128, 222

Index

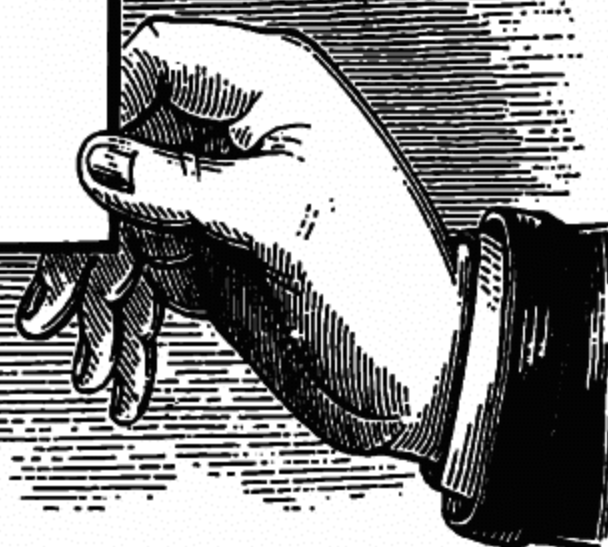
- Swift, Jonathan, 92, 492; *Gulliver's Travels*, 147
- Swinburne, Algernon Charles, 846; "The Garden of Prosperine," 254
- symphony, 88, 201
- Syncom 3, 182
- Syria, 39, 51, 149
- Szilard, Leo, 714
- Tagore, Rabindranath, 897; *Gitanjali*, 268
- Tahiti, 58, 164
- Taira clan, 179
- Taiwan, 137
- Taj Mahal, 143
- Talleyrand, Charles-Maurice, 419
- Talmud, 177
- Tamerlane, 511, 27, 165, 209
- Tansen, Miyan, 241
- Tanzania, 286
- Tatars, 73, 209, 222
- Taylor, A.J.P., 80
- Taylor, Frederick Winslow, 414, 121, 276
- Tchaikovsky, Pyotr Ilich, 203, 301; *Sleeping Beauty*, 252
- tea ceremony, Japanese, 178
- Tecumseh, 546
- Teilhard de Chardin, Pierre, 809
- telegraph, 99-100, 189
- telephone, 22, 183
- television, 26, 51, 182, 194, 205, 249-50, 295, 302
- Teller, Edward, 24
- temporary insanity plea, 230
- tennis, 295-96
- Tennyson, Alfred Lord, 16, 219
- Teresa, Mother, 772, 64, 186
- Teresa of Avila, 949; *Life and the Way of Perfection*, 285
- Terry, Clark, 98, 158
- Terry, Ellen, 254
- Thatcher, Margaret, 719, 72, 220, 222
- theater, 46-47, 50, 5253, 57, 117, 118, 128-29, 139, 166, 168, 199, 229, 244, 247, 252-53, 261, 277-78, 279
- thermodynamics, 34
- thermometer, 78, 79
- Thimonnier, Barthélemy, 316, 91
- Thirty Year's War, 128
- Thomas, Dylan, 266
- Thomson, William, 111
- Thoreau, Henry David, 375, 153; *Civil Disobedience*, 112
- Thorpe, Jim, 678, 61
- Tiananmen Square massacre (1989), 188
- Tibet, 56
- Time magazine, 165
- tires, 184
- Titian, 82, 84, 122, 261
- tobacco, 133, 142
- Tocqueville, Alexis de, 611; *Democracy in America*, 184
- toilets, 123, 296
- Tokugawa Ieyasu, 370
- Tokyo, 182, 213
- Tolstoy, Leo, 34, 54, 57, 73; *War and Peace*, 11
- Torquemada, Tomás de, 400
- Torrio, Johnny, 524
- Toulouse-Lautrec, Henri, 817, 155, 197; *At the Moulin Rouge*, 246
- Toussaint-L'Ouverture, François-Dominique, 782
- Townes, Charles H., 819
- Toyotomi Hideyoshi, 57
- track and field, 174, 203, 224, 289
- trade unionism, 198, 289
- Transcendentalism, 112, 152-53
- transistor, 214
- transplants, 65
- travel, 8, 20, 31, 32, 44, 70, 71, 74, 116, 127, 156, 245, 262-63, 282
- Treasury, U.S., 131
- Trobriand Islands, 256
- Trollope, Anthony, 92
- Trotsky, Leon, 429
- Troyat, Henri, 11
- Truffaut, François, 931; *Jules and Jim*, 280
- Truman, Harry S., 485, 104, 137, 179, 246, 289
- Ts'ao Chan, 651; *Dream of the Red Chamber*, 196
- Tsiolkovsky, Konstantin E., 6371; *Investigation of Cosmic Space by Reactive Machines*, 192
- Tubman, Harriet, 534
- Tuchman, Barbara, 129
- Tull, Jethro, 975
- Tulsidas, 757; *Sacred Lake of the Deeds of Rama*, 227
- Turing, Alan, 445, 23
- Turkey, 54, 145, 156, 170, 209, 232, 282
- Tuskegee Institute, 137
- Twain, Mark, 188, 160, 269; *The Adventures of Huckleberry Finn*, 56; *The Adventures of Tom Sawyer*, 56; *A Connecticut Yankee in King Arthur's Court*, 56
- typewriter, 160
- typhoid, 175-76
- Underground Railroad, 161
- Unitarian Church, 80
- United Mine Workers of America, 289
- United Nations, 47, 158, 187
- Unkei, 699
- Urban II, Pope, 65
- USA Today, 295
- utilitarianism, 24, 115
- Utopian communities, 176
- vaccination, 27, 95
- vacuum cleaners, 296
- Vanderbilt, Cornelius, 566
- Van Dyck, Anthony, 870, 56; *Maria Louisa de Tassis*, 261
- Van Gogh, Theo, 48, 164
- Van Gogh, Vincent, 158, 164, 221; *The Potato Eaters*, 48; *Starry Night*, 48
- Vasari, Giorgio, 78
- Vasquez, Diego, 45
- Vauban, Sébastien Le Prestre de, 748
- Vaucanson, Jacques, 52
- Vaux, Calvert, 141
- Venezuela, 15, 176
- Venice, 70, 122, 261
- Verdi, Giuseppe, 476; *Aida*, 143; *Rigoletto*, 143; *La Traviata*, 262
- Verlaine, Paul, 169, 265
- Vermeer, Jan, 513
- Verne, Jules, 519; *A Journey to the Center of the Earth*, 157
- Versailles, 19, 234
- Vesalius, Andreas, 234, 135; *De Humani Corporis Fabrica*, 71
- Vespucci, Amerigo, 198, 301
- Vico, Giambattista, 299; *The New Science*, 89
- Victor Emmanuel II, King of Sardinia, 267
- Victoria, Queen of England, 91, 68, 83, 182, 192, 193, 242
- Vidal, Gore, 272
- Vienna, 88, 107, 123, 190, 242
- Vietnam War, 169, 177, 204, 247, 273

Index

- Vikings, 124-25
 Villa, Pancho, 938
 Villon, François, 533
 Vincent of Beauvais, 447, 171;
Speculum Majus, 134-35
 violin, 186
 vitamins, 161, 204
 Vivaldi, Antonio, 732; *The Four Seasons*, 220
 Volta, Alessandro, 425, 152
 Voltaire, 36, 3, 18, 29, 68, 81, 92, 244, 292; *Candide*, 12, 26
 Von Neumann, John, 959
 Vostok I spacecraft, 149
 vulcanization, 184
- W., Bill, 381
 Wagner, Richard, 165, 40, 82, 89, 106, 122, 143, 200; *Tristan and Isolde*, 50; *Die Walküre*, 50
 Walesa, Lech, 134
 Wall Street, 131
 Walsingham, Francis, 10
 Walter, Bruno, 50
 Walton, Isaac, 767; *The Compleat Angler*, 230
 Ward, Aaron Montgomery, 501
 Warhol, Andy, 1,000, 298
 War of Canudos, 233
 War of 1812, 80
 Washington, Booker T., 458, 62, 124
 Washington, George, 22, 1, 12, 15, 28, 56, 65, 85, 106, 164, 182, 242, 255, 277, 291
 Watergate scandal, 273
 Waterloo, 83, 268, 292
 Waters, Muddy, 766
 Watson, James D., 123, 1, 31
 Watson, Thomas, 22
 Watson-Watt, Robert A., 646
 Watt, James, 110
 Wayne, John, 215, 286
 weather forecasting, 71
 Webber, Andrew Lloyd, 70
 Weber, Max, 806, 18, 21; *The Protestant Ethic and the Spirit of Capitalism*, 243
 Weight Watchers, 226
 Wellington, Duke of, 278, 79, 292
 Wells, H. G., 157
 Wells-Barnett, Ida B., 305
- Werfel, Franz, 173
 West Indies, 72, 97, 179
 Westinghouse Electric Corporation, 26
 Wheeler, John Archibald, 41
 Whistler, James McNeill, 762, 172; *Whistler's Mother*, 229
 White, Theodore, 173
 Whitman, Walt, 318, 18, 153; *Leaves of Grass*, 96
 Whitney, Eli, 135
 Whittle, Frank, 245
 Wiesel, Elie, 284
 Wiesenthal, Simon, 945
 Wilberforce, William, 810
 Wilde, Oscar, 574, 229; *The Importance of Being Earnest*, 172
 Wiley, Harvey, 867
 Wilhelm II, Kaiser of Germany, 224, 104
 Wilkins, Maurice, 38
 Willard, Frances, 677
 William I, King of England, 29
 William I, King of Germany, 36
 William III, King of England, 56
 William of Hesse-Hanau, Prince, 78
 William of Sens, 594
 Williams, Daniel Hale, 980
 William the Silent, 489
 Wilmot, Ian, 616
 Wilson, Edmund, 119
 Wilson, Woodrow, 437, 282
 Winfrey, Oprah, 302
 Wingfield, Henry, 61
 Wingfield, Walter C., 988
 Wirth, Louis, 842; "Urbanism as a Way of Life," 253
 Wittgenstein, Ludwig, 634; *Tractatus Logico-Philosophicus*, 191
 Wolfe, James, 655
 Wollstonecraft, Mary, 45, 98; *Vindication of the Rights of Woman*, 14
 Women's Christian Temperance Union, 203
 women's clubs, 280
 women's rights, 14, 24, 25-26, 29, 42-43, 63, 72, 76, 80, 98, 107-8, 172, 216, 258, 259-60, 280
 woodblock prints, 143, 155
 Woolf, Virginia, 441, 167, 188;
- Mrs. Dalloway*, 133; *To the Lighthouse*, 133
 Wordsworth, William, 577, 3, 230
 worker's environmental hazards, 257
 World War I, 7, 35, 36, 47, 53, 63, 64, 68, 80, 101, 104, 126, 130, 132, 153, 177, 191, 214, 237, 239, 256, 265, 274, 283
 World War II, 7, 12, 24, 53, 86, 104, 108, 112, 118, 125, 130, 131, 132, 134, 138, 141, 145, 153, 155, 156, 165, 179, 192, 199, 214, 226, 232, 233, 239, 245, 249, 260, 268, 273, 277, 290
 Worsae, J.J.A., 216
 Worth, Charles Frederick, 770
 Wozniak, Stephen, 713, 211
 Wren, Christopher, 259
 Wright, Frank Lloyd, 160
 Wright, Orville, 23, 31, 32, 247, 266
 Wright, Wilbur, 23, 31, 32, 247, 266
 Wundt, Wilhelm, 490; *Principles of Physiological Psychology*, 146
 Wycliffe, John, 337, 28, 116
 Wythe, George, 575
- Xavier, Francis, 226
 Xenophon, 64
 Xerox, 206
 X-rays, 82-83, 204
- Yamagata Arimoto, 361
 Yeats, William Butler, 521, 103, 110, 268; *To the Rose Upon the Rood of Time*, 157
 Yevtushenko, Yevgeny, 73
 Yo Fei, 396
 Yoshida Shoin, 193
 Young, Brigham, 812, 241
 Yung-lo, 422
- Zaharias, Mildred "Babe" Didrikson, 581, 61
 Zaire, 221
 Zen Buddhism, 178, 209
 Zhou Enlai, 576
 Zionism, 65, 95
 Zola, Émile, 607, 181, 214; *Germinal*, 183; *Nana*, 183
 Zulus, 166, 208
 Zwangendaba, King, 695
 Zworykin, Vladimir K., 1, 87

AMONG THE TOP 1,000 PEOPLE OF THE PAST
MILLENNIUM ARE MANY WHOM YOU MAY
NEVER HAVE HEARD OF
(OR ARE SOMEWHAT FUZZY ABOUT).
WHAT DO YOU KNOW ABOUT THESE?

Alexander Fleming #55
John Eckert #76
Chu Hsi #93
William LeBaron Jenny #89
Petrus Peregrinus #101
Ibn Sīnā #161
John Gorrie #450
Marie LaChapelle #559
Andreas Marggraf #621
Friedrich Wilhelm Bessel #750
John Graunt #824
Ada Byron Lovelace #960



Flywell

Flywell Publications
B-2/50, Safdarjung Enclave
New Delhi 110029
India

Mosaic Books
B-17, 2nd Floor
Lajpat Nagar Part 2
New Delhi 110024
India

ISBN 81-902776-7-7



9 788190 277679

Sri Satguru Jagjit Singh Ji Elibrary

NamdhariElibrary@gmail.com